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# SCHOOL LIFE

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*June 1937*

*Vol. 22 • No. 10*



## *IN THIS ISSUE*



Office of Education's New Home • Publications in Review • A Program of Co-operative Research • Forums and Reading • Airways to Learning • Salary Trends in Rural Schools • College Entrance Requirements

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*Official Organ of the Office of Education*

UNITED STATES DEPARTMENT OF THE INTERIOR • WASHINGTON

# WRITE TO:

The Office of Education,  
U.S. Department of the  
Interior, Washington,  
D. C., for published  
information on—

Nursery-Kindergarten-  
Primary Education

Elementary Education

Secondary Education

Colleges and Professional  
Schools

School Administration

School Finance

School Legislation

Exceptional Child  
Education

Rural School Problems

School Supervision

School Statistics

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Agricultural Education

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Negro Education

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Native and Minority  
Group Education

Vocational Education

Parent Education

Physical Education

Rehabilitation

Teacher Education

Health Education

Industrial Education

Educational Tests and  
Measurements

Comparative Education

Adult Education

# SCHOOL LIFE

Congress, in 1867, established the Office of Education to "collect such statistics and facts as shall show the condition and progress of education in the several States and Territories"; to "diffuse such information as shall aid in the establishment and maintenance of efficient school systems"; and "otherwise to promote the cause of education throughout the country." To diffuse expeditiously information and facts collected, the Office of Education publishes SCHOOL LIFE, a monthly service, September through June. SCHOOL LIFE provides a national perspective of education in the United States. Order its service for 1 year by sending \$1.00 to the Superintendent of Documents, Government Printing Office, Washington, D. C. To foreign countries, \$1.45 a year. On all orders for 100 copies or more to be sent to one address, the Superintendent of Documents allows a discount of 25 percent. Enter subscriptions also through magazine dealers. Send all editorial communications pertaining to SCHOOL LIFE to Editorial Division, Office of Education, U. S. Department of the Interior, Washington, D. C. The printing of SCHOOL LIFE has been approved by the Director of the Budget.



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## Lessons of Peace



DURING the past few months I have been deeply interested in watching the development of a project here in Washington, which in my opinion, will dramatize to the Nation what *Scouting* stands for. I refer to the *Boy Scout Jamboree* encampment arising upon the banks of the Potomac River. Here 25,000 boys from hither and yon, will soon come to hold what Scouts call a *Jamboree*.

This Boy Scout Encampment will be the greatest gathering of youth for a peaceful purpose that you and I have ever seen. What a significant difference between this encampment and those encampments of 20 years ago when young men gathered in military camps to train for war! This will be a happy adventure for the boys who assemble here in the Capital City. It will be an inspiring visit to the Nation's shrines. It will be a glorious opportunity for making new friends and for creating good will and understanding. What finer way than this could be found to encourage boys to emulate the best traditions of our land!

The Boy Scout Jamboree presents a unique and workable plan for teaching *lessons of peace* in a most practical way. Should it do nothing else, it will have been worth while in bringing together the youth of the land in a setting where they may learn for themselves that boys in other parts of the country are just like themselves, with the same hopes, the same skills, the same training; and that through friendships formed around the myriad of Jamboree campfires there can be developed a national understanding and friendship which will draw all of us closer together and will profoundly influence our lives.

There are more than 32,000 Scoutmasters in the United States, serving more than a million boys, and assisted by 200,000 other men who, as committeemen and counselors, support the Scout work. I consider these men as *heroes of peace* and add their names to the Nation's roster of great heroes. I wish to pay my respects to these heroes and extend to them the thanks of the men and women of our Nation for the constructive and worthwhile activities they are helping to make possible for the Nation's boys.

*J. H. Studdabaker*

Commissioner of Education.





## Office of Education . . .

**E**ACH YEAR the Office of Education issues a number of new publications based upon research in the various fields of its service. These publications vary from brief reports to extensive bulletins containing charts, photographs, and other illustrative material.

Upon release of a publication, a very limited supply is available for free distribution, and this supply is usually exhausted within a short time. By far the greatest distribution is made through the Superintendent of Documents, Government Printing Office, Washington. The Superintendent's reports show annual sales of Office of Education publications totaling well on to half a million copies.

These publications are widely used as source material both in this country and abroad, by authors, journals, publishing houses, and others. Another heavy demand comes from libraries, schools, and colleges.

The following brief reviews of a sampling of current publications indicate in a measure the varied range of subject matter presented by the Office of Education.

**CONSERVATION IN THE EDUCATION PROGRAM, Bulletin 1937, No. 4, by William H. Bristow, General Secretary, National Congress of Parents and Teachers, and Katherine M. Cook, Chief, Division of Special Problems, Office of Education. Price, 10 cents.**

During the past year, an initial step was taken in the Office of Education to assist school officials in introducing conservation instruction into the school program. One result is a bulletin which surveys work under way in certain elementary and secondary schools and teacher-training institutions; discusses the need for conservation instruction in the schools; and sets forth desirable objectives as generally accepted by curricular and other school officials.

The bulletin also contains a number of suggestive units developed by teachers and students which are suitable for use

at elementary and junior high school levels. Lists of sources of information and of Government and voluntary conservation agencies, together with other informative material useful to superintendents and teachers, are included in the publication.

### How to Order

**F**OR any publication reviewed here, or for other printed publications of the Office of Education, orders should be sent direct to the Superintendent of Documents, Government Printing Office, Washington, D. C., enclosing check, postal money order, express order, New York draft, or currency (at sender's risk) to cover same.

**Crucial Issues in Education, Pamphlet No. 74, by J. W. Studebaker, Commissioner of Education. Price, 5 cents.**

The conflict between two principles of social organization representing democracy on the one hand and dictatorship on the other seems to be reaching a crisis throughout the world. Commissioner of Education J. W. Studebaker discusses the implications of this crisis in relation to educational policies and processes.

Emphasizing the educator's responsibilities in undergirding democracy, Dr. Studebaker writes of education in relation to such other grave situations as widespread unemployment among youth, juvenile delinquency, and threats of war. Stating that the first line of attack in the solution of these problems lies in the vitalization of education, the Commissioner urges extension of the organized learning process through the use of radio and the community forum to supplement the formal school in providing equal educational opportunity to all. Educational programs stressing conservation of natural resources, emphasizing safety,

fostering better understanding between the Americas, and popularizing the liberal arts to raise the general cultural level are suggested in the publication.

**A Guide to Curriculum Adjustment for Mentally Retarded Children, Bulletin 1936, No. 11, edited by Elise H. Martens, Senior Specialist in the Education of Exceptional Children. Price, 20 cents.**

This bulletin is the outcome of a conference of specialists in the education of retarded children, called by the Office of Education to consider the problems of curriculum adjustment for this group of the school's population. On the basis of the principle that experience is the basis of learning, suggestions are presented for the development of a curricular program in keeping with the needs and capacities of children who are academically seriously retarded. Experiences in the various fields of activity or subject matter are described; possibilities for bringing them together into an integrated program are pointed out; and their contributions to the satisfaction of present and future needs of the child are indicated. Consideration is given to problems common to both residential and day schools as well as to their differentiating characteristics. Finally, emphasis is placed upon the responsibility of the State in relation to the development of the curriculum and to the entire educational program for mentally handicapped children.

**Poland's Institutions of Higher Education, Bulletin 1936, No. 14, by Severin K. Turowski, Specialist in Comparative Education. Price, 25 cents.**

This publication deals with 35 academic schools of university rank which are maintained by public and private effort in Poland. Its purposes are to record in English the current status of higher education in Poland and give a better appreciation of it, and to supply information that can probably be used to improve education in the United States.



## ... Publications in Review

The primary and secondary school systems leading to admission to higher institutions are outlined briefly but in sufficient detail that comparisons may be made with pre-university training in other countries. The eight classes of academic schools described are classical universities; technical institutions; schools of agriculture and veterinary medicine; schools of commerce, foreign cultures, political science, and journalism; teacher-training institutions; schools of dentistry; schools of fine arts, music, and dramatics; and schools for national defense.

The official curricula in law, medicine, pharmacy, pedagogics, and the various fields of engineering, agriculture, and commerce, are treated rather fully because they represent the best efforts of an active ministry of education to work out kinds of higher instruction that will most advantageously promote the national welfare of Poland. The administrative organization is outlined as a matter of lesser importance with no special emphasis. A short historical sketch opens the account for each institution.

**Scholarships and Fellowships Available at Institutions of Higher Learning, Bulletin 1936, No. 10, by Ella B. Ratcliffe, Chief Educational Assistant, Division of Higher Education. Price, 15 cents.**

At a time when financial difficulties stand in the way of a college education for many students, it is important to bring to their attention the opportunities offered through scholarships and fellowships.

This bulletin contains sections dealing with scholarships and fellowships offered at institutions supported by the State, by municipalities, and by private endowment. The data in each of these sections, arranged in tabular form, show for each institution the value of the scholarship and fellowship funds, the number of grants available, the number given free, the number which require service, the length of time they may be held, and the

number of grants available to men only, to women only, or to both sexes.

The division of the bulletin relating to scholarships at State-supported institutions contains a section on scholarships awarded under authority of State law, which gives briefly the chief provisions of the law in each State where such a law is in effect. This section also includes digests of the laws granting scholarships to citizens of the State in general and of the laws relating to scholarships for World War orphans. A short list of other publications dealing with scholarships and fellowships is appended.

**Instruction in Hygiene in Institutions of Higher Learning, Bulletin 1936, No. 7, by James Frederick Rogers, M. D., Consultant in Hygiene. Price, 10 cents.**

Six centuries ago Roger Bacon remarked that not more than one person in 3,000 exhibited any interest in his health, and then only when he had reached advanced years. It was not until Shakespeare's day that there appeared, in London, the first book on health written "for the comfort of students." In this country Harvard College offered its undergraduates, a hundred years ago, the first course of lectures on hygiene.

Bulletin 1936, No. 7, reviews the subject of health instruction in colleges and universities from its beginnings and offers the results of the first general canvas in this field of all institutions of higher education. Information is furnished as to whether courses in hygiene are offered; whether they are required or elective; the length of the courses, and the topics covered; the preparation of the instructor; and his material and equipment; the methods of instruction and other details.

While the tendency of late has been to make more and more of their work elective, about one-third of our colleges and universities have a required course in hygiene. Just why the other institutions do not take the subject so seriously it is difficult to say, although the author of

the bulletin hazards an explanation. However, we have certainly made progress in doing, as well as talking, about health since the pessimistic utterance of the father of modern science.

**State Provisions for Equalizing the Cost of Public Education, Bulletin 1936, No. 4, by Timon Covert, Specialist in School Finance. Price, 10 cents.**

This study calls attention to the consistency with which State legal documents classify public education as a function of the State government and to the inconsistency between such legal classifications and the many cases of neglect on the part of States to provide adequately for public-school support. It shows that, for the country as a whole, State governments supplied about one-fourth of the funds used by the public schools in 1934. Between 1900 and 1925, the part the States supplied decreased from 20.3 to 16 percent. Since 1925 it has increased, with a significant increase since 1930. As would be expected, there is a much wider range of variation in the percent of public-school revenue provided by individual States than in the percent provided by all States combined.

The bulletin also analyzes sources of State school revenues and shows how the State funds are apportioned. Considerably more than half of the State money for the country as a whole was appropriated in 1934 from general State funds; not quite half of the States levied general property taxes for their public-school funds; while a large number of States provided various types of taxes for the benefit of their school funds.

The study shows that in a large number of States the apportionment of State school funds was made according to the number of school children or other measure of the education load and without regard to the local ability to pay. However, legislation during the last 15 years indicates a definite attempt on the part of States to equalize school costs in their methods of distributing funds.



**Graduate Work in Engineering in Universities and Colleges in the United States, Bulletin 1936, No. 8, by Walton C. John, Senior Specialist in Higher Education, Office of Education, and H. P. Hammond, of the Society for the Promotion of Engineering Education. Price, 15 cents.**

This survey of engineering education on the graduate level has for its purpose the presentation of recent developments in the graduate study of engineering in more than 80 colleges or schools of engineering.

The study discusses tendencies in the administration of graduate work in engineering; the problems confronting the teaching staffs that have the responsibility of training graduate students; characteristic programs of graduate students; the evolution of cooperative and part-time graduate work; the problems relating to admission and graduation requirements, including the thesis, examination methods, and different higher degrees; the relationship of graduate work to undergraduate work; scholarships and fellowships; and the relation of graduate students in engineering to industry.

**The Deaf and the Hard-of-Hearing in the Occupational World, Bulletin 1936, No. 13, by Elise H. Martens, Senior Specialist in the Education of Exceptional Children, Office of Education, et al. Price, 15 cents.**

Under the Civil Works Administration, the Office of Education was authorized to carry on a project designed to throw light upon the problem of guidance for deaf and hard-of-hearing pupils enrolled in the schools. With the cooperation of a number of educators and others interested in the welfare of the deaf, a survey was made of the occupational status of approximately 20,000 deaf and hard-of-hearing adults. Attention was given to the types of occupations in which they were engaged, and to the relation between occupation followed and other factors, such as age, degree of deafness, educational achievement, vocational training and success on the job. Employers were interviewed for the purpose of securing their point of view regarding the employment of deaf or hard-of-hearing workers. Bulletin 1936, No. 13, constitutes a report of this project and of the findings accruing from it. Implications of the results are discussed as they bear upon the education and the vocational preparation of deaf and hard-of-hearing young people.

**Safeguarding Democracy Through Adult Civic Education, Bulletin 1936,**

**No. 6, by J. W. Studebaker, U. S. Commissioner of Education. Price, 5 cents.**

This bulletin is a plea for an extension of the forum technique in educating the adults of this country, of whom the great mass have gone no farther than grammar school, a much smaller number have finished high school, and a comparative few have completed college and graduate work. The Des Moines forums are pointed out as the pattern for a nationwide network of free public forums to bring about a more thorough public understanding of the vital issues confronting American democracy.

**A Step Forward for Adult Civic Education, Bulletin 1936, No. 16. Price, 10 cents.**

This is a study of the forum demonstration centers sponsored by the Office of Education, managed by local educational agencies, and devoted to civic enlightenment through free public discussion. It tells how the forums are managed; how leaders, subjects, and centers are selected; how speakers may be secured. It outlines plans for the future based on factual information about the first 3 months of the public forum program, and paints a comprehensive picture of the objectives of the program in adult civic education.

**Public Affair Pamphlets, Bulletin 1937, No. 3, compiled by Phyllis D. Mills. Price, 10 cents.**

This annotated bibliography suggests easily available readings on current social, political, and economic questions, for the use of forum patrons and leaders, debating societies, and social science classes. It lists over 600 pamphlets, giving their price, publisher, and availability upon consignment or otherwise. The contents are briefly described, with no attempt at evaluation. There are cross-references by author, title, subject, and publisher. Monthly supplements listing new material are issued in mimeographed form.

**YOUTH, Bulletin 1936, No. 18.**

**I. How Communities Can Help, prepared by the Committee on Youth Problems. Price, 10 cents.**

**II. Leisure For Living, by Katherine Glover. Price, 15 cents.**

**III. Education For Those Out of School, by H. B. Swanson. Price, 10 cents.**

**IV. Vocational Guidance For Those Out of School, by Harry D. Kitson, Professor of Education,**

**Teachers College, Columbia University. Price, 10 cents.**

**V. Finding Jobs, by D. L. Harley. Price, 10 cents.**

**VI. Community Surveys, by Carl A. Jessen, Senior Specialist in Secondary Education, and H. Clifton Hutchins, Research Assistant to the Committee on Youth Problems. Price, 15 cents.**

Despite the fact that high schools are holding an increasing percentage of students through to graduation and colleges are enrolling ever larger numbers, thousands of young people are today out of school and unemployed. Unemployment is serious for persons of any age, but the psychological effect is possibly most serious in the case of young people. This period of enforced idleness is one of the gravest aspects of the social change which results from technological development and from many other factors.

With the aid of a foundation fund, the Office of Education has conducted two studies of Youth's problems. One study had to do with what individuals and communities are doing to help Youth. Questionnaires were sent to approximately 15,000 youth and community leaders in schools, juvenile courts, Y. M. C. A.'s, boys' clubs, etc. The replies from their inquiries were compiled into the first five parts listed above. The sixth part describes methods of ascertaining the special needs of the Youth of any community.

The six parts of the bulletin give a comprehensive view of the conditions confronting unemployed out-of-school Youth and what is being done to alleviate the situation.

**Authority of State Executive Agencies over Higher Education, Bulletin 1936, No. 15, by John H. McNeely, Specialist in Higher Education. Price, 10 cents.**

An essential to the success of State universities and colleges is the maintenance of their control independent of the regularly constituted executive officers and agencies of State governments. For this reason the institutions have been placed in most instances under the management of specially created governing boards endowed with a virtual trusteeship over their internal affairs.

In this bulletin are presented the legal powers at present vested in State executive officers and agencies, as applicable to the institutions in each of the 48 States. The material was obtained through an examination of State constitutions, statutes, and legislative session laws. The bulletin is the first Nationwide study and analysis of the laws of the States relating to this problem.



**Functional Planning of Elementary School Buildings, Bulletin 1936, No. 19, by Alice Barrows, Specialist in School Building Problems. Price, 25 cents.**

This bulletin is the result of a cooperative piece of work carried to completion by the Office of Education with assistance from the National Advisory Council on School Building Problems. The study seems particularly important at the present time because of the increase in school building construction made possible through PWA grants and loans, and generally accelerated activity in the school building field. The publication contains 83 pages and is extensively illustrated with pictures of school buildings, floor plans, charts, etc.

**Public Education in Alaska, Bulletin 1936, No. 12, by Katherine M. Cook, Chief, Division of Special Problems. Price, 10 cents.**

A bulletin on public education in Alaska was added during the past year to the series on Education in the outlying parts of the United States. The bulletin is a brief survey of the history of education in Alaska since the responsibility for providing school facilities was delegated to the Department of the Interior by Congress in 1886 and assigned to the Bureau of Education, now the Office of Education. There is a brief review of educational conditions during the Russian régime and of the social and economic situation among the native peoples, as a background for a better understanding of the work of the schools. There is also a brief description of the Territorial school system. Chiefly, however, the manuscript is devoted to the work of the Office of Education in raising standards of living and promoting social and economic adjustment of the natives of Alaska through education.

**William Torrey Harris. The Commemoration of the One-Hundredth Anniversary of his Birth, Bulletin 1936, No. 17, edited by Walton C. John, Senior Specialist in Higher Education. Price, 15 cents.**

The purpose of this bulletin is to call attention to the outstanding contributions to education and philosophy of Dr. William T. Harris, Commissioner of Education between 1889 and 1906, who for nearly half a century was one of the most powerful influences in the advancement of education and philosophy in this country.

The bulletin records the tributes paid to him at a dinner in Washington on

December 9, 1935, the meeting of the Department of Superintendence at St. Louis March 24, 1936, and a gathering of friends at North Killingly, Conn., May 26, 1936.

**Aviation in the Public Schools, Vocational Education Bulletin No. 185, by Robert W. Hambrook, Agent, Industrial Education. Price, 15 cents.**

It's a fine thing for a boy to know how to repair his father's car or to build a model airplane. But the ability to do either or both of these things does not necessarily entitle him to employment with an air line or in an airplane factory. Hundreds of letters received by the Office of Education, the Bureau of Air Commerce, air lines, aircraft factories, and aviation schools attest the widespread and popular interest in aviation occupations. Reports from the aviation industry on the other hand show that, of the thousands who apply for employment, comparatively few are accepted. Why? Because only those who are occupationally competent and trained in the field of aviation are acceptable to the industry. Aviation occupations and the opportunities for employment in aviation are only two of the many topics discussed in this bulletin. An entire chapter is devoted to a discussion of vocational training in aviation. Those interested in the development and present status of aviation or in model aircraft work will find these topics covered also.

**Home Economics Education Courses, Vocational Education Bulletin No. 187. Price, 15 cents.**

Not enough attention is being given in home economics teacher-training institutions to experiences which are typical of other responsibilities besides classroom teaching, according to alumnae of teacher-training institutions reached through a survey of practices in these institutions made by Florence Blazier, head of home economics teacher training at Oregon State College.

Those reached in the study reported in this bulletin were asked by Dr. Blazier to express themselves on 76 different topics. The 115 supervisors and itinerant teacher trainers, the 85 instructors of home economics education courses, and the 437 recent graduates agreed that 11 of the 76 topics were of much value. These deal in general with the setting up of objectives and their use in determining subject matter, the development of personality and of professional standards, the coordination of home and school work, and the selection and use of illustrative material, texts, and references.

**Vocational Rehabilitation of the Physically Handicapped, Vocational Education Bulletin No. 190. Price, 15 cents.**

One thousand disabled persons whose records were studied by the rehabilitation division of the Office of Education were, prior to their rehabilitation, receiving yearly earnings totaling \$332,132 a year. After their rehabilitation, their earnings increased to \$1,035,780 a year. It cost the State and Federal Governments an average of \$291 per case, or a total of \$291,000, to accomplish these rehabilitations. Return on the investment—219 percent. Six hundred and ninety-six of the one thousand cases studied were earning no wage prior to being vocationally rehabilitated. Wages of the 1,000 persons after rehabilitation ranged from \$15 to \$75 per week. These and other revealing facts are to be found in this publication.

**Cooperative Training in Retail Selling in the Public Secondary Schools, Vocational Education Bulletin No. 186, by Glenn Oscar Emick. Price, 20 cents.**

The ability to meet people and use good English in conversing with them is important for those engaged in selling occupations, according to information developed in a study of courses offered in these occupations. The results of the study are incorporated in this bulletin.

The study also reveals many other interesting facts. It shows that no clear relationship exists between the size of a city and the enrollment in retail selling classes therein. And it contains other information on courses in retail selling occupations of special interest at this time, in view of the passage by the last Congress of the George-Deen Act, authorizing specific Federal grants for training in the distributive occupations.

**Young Men in Farming, Vocational Bulletin No. 188. Price, 15 cents.**

One of the interesting items covered in connection with the study of 100 young men on farms in northern Tompkins County, N. Y., the results of which are incorporated in this bulletin, was the source from which these young men secure their incomes and the things for which they spend their money. These and many other factors were studied to show the diversity of the factors affecting the ability of young men to become established in farming, and to develop facts which will help the vocational agriculture teacher in setting up his instruction program.





Secretary Ickes.

## The National School Assembly

"If anyone had told me, when I went to school, that an assembly of several millions of pupils would some day be held, I couldn't have believed him. But in these days we have to get used to enterprises that operate on a giant scale," asserted the Secretary of the Interior, Harold L. Ickes, in an address broadcast on the National School Assembly program from Washington, May 14. The program was an offering of the Office of Education Radio Project.

The following statements are further excerpts from the Secretary's address:

"I always like to speak of the great resources of America. But it gives me especial pleasure to speak of them to you, the youth of the Nation, who are the greatest resource of all. It is for you that we are trying to conserve the wealth of our land.

"I am deeply impressed by this National School Assembly program today, because you and I are now using another great natural resource, the air, for an

entirely new purpose—a Nation-wide school assembly. How stimulating it is to think that radio waves can be used to bring us all more closely together as citizens of a vast nation.

"I realize that no other Secretary of the Interior has ever had the opportunity of addressing so many young people just preparing to step into the real exercise of their citizenship, young people gathered in towns and cities and rural districts that are spread out as widely as the public domain itself. You are nearer to each other and to your Government than you could possibly be without the modern miracle of radio."

"It has been said that Americans are a materialistic people, more interested in things than in dreams. I do not think so. We have proved that we can rally to the defense of the power and the glory of the democracy which is the American dream.

"In some other countries democracy is now being assailed. The right of the common man, of every man, to share in the rights of citizenship is threatened; faith in his ability to contribute to and preserve self-government is repudiated.

"In this country you have been learning to practice democracy almost from the day you were born—in your homes and schools, on the baseball diamond, and in every other association. For those of you who leave school this spring, the pattern of life will change. Certain trends of our social order are being challenged. I urge you to let the philosophy you have known since childhood, the philosophy of the democratic way of life, be always your philosophy."

\* \* \* \*

"I leave with you two great responsibilities. The first is the conservation of our natural resources, which means using them most effectively for the common welfare. The second is the preservation of the sturdy traditions of democracy. This is a task even more difficult than the first.

"We could not hope to live without natural resources. No more can a democracy hope to exist without intelligent and responsive citizens and voters. You have been learning a great many facts in your school years, but they will prove useless unless you make them the basis of intelligent decisions. The man or woman who does not vote, and vote intelligently, has no right to complain if his city or his national government doesn't suit him.

"And so in bidding you farewell, I make this prophecy, a prophecy for the Class of 1937: If we plan intelligently and work for the preservation of Nature's gifts and our fathers' dreams, the new era for which we all hope will surely come."

Other speakers on this unusual program were Walter L. Pitkin, of New York, who spoke on careers for young people; Edward A. Filene, of Boston, who gave the Assembly advice on how to make the most of life; and J. W. Studebaker, Commissioner of Education.

### ★ Public Affairs

A COMPREHENSIVE index of pamphlets in the field of public affairs, listing 660 pamphlets with annotations, prices, and additional information, has been made available by the Office of Education. Copies may be had for 10 cents from the Superintendent of Documents, Washington, D. C. A 25-percent reduction is allowed in quantities of 100 or more. Ask for Office of Education Bulletin 1937, No. 3.

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# A Program of Cooperative Research

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**U**NIVERSITIES and colleges that participated in the Project in Research in Universities completed the last of their cooperative project research studies early in 1937. Specialists in the Office of Education who served as study coordinators began the task of assembling and coordinating institutional study findings, and of preparing consolidated study reports for the printer.

The Project in Research in Universities was authorized under the Emergency Relief Appropriation Act of 1935 with the Office of Education as the general directing agency. A total allotment of \$411,695 was made.

The administrative and professional staffs in Washington were organized early in 1936. Preliminary plans for the conduct of the project were completed, and outlines of cooperative research studies were prepared. Harvey H. Davis, of Ohio State University, served as associate director for 2 months during a leave of absence from his institution. Then, Joseph R. Gerberich, of the University of Arkansas and Assistant to the Director of the Education Division of the Works Progress Administration, was appointed as Associate Director. Bess Goodykoontz, Assistant Commissioner of Education, is in general charge of the project.

The announcement and preliminary plan of the project were sent by the Commissioner of Education, J. W. Studebaker, to the presidents, deans of graduate schools, and deans of education of universities and comparable institutions having organized graduate research work with a dean or director in charge. More than 90 percent of the institutions to which the announcement was sent expressed their desire to participate in the project. Not all could do so, however, since relief workers qualified for research work were not available in some WPA districts. The qualifications demanded of research workers necessarily were high, and no institution was expected to proceed unless qualified workers were available in sufficient numbers to carry through satisfactorily the research studies proposed. Sixty universities and comparable institutions located in 32 States, the District of Columbia, and Hawaii

## Benjamin W. Frazier, Senior Specialist in Teacher Training, and Director of the University Research Project of the Office of Education, Reports on Project

participated actively in the project during most of the year 1936. Twenty-four other institutions took the necessary steps to qualify for active project work in case qualified workers could later be found.

### Local direction

The local administration of the project in each institution was placed in the hands of a local project administrator, nominated by the president of the university. The detailed local supervision of the research work in each study was placed in the hands of a dean, professor, research director, or other staff member of the institution who volunteered for such work. One hundred forty-eight of these university officers and teachers served as institutional study supervisors. Both the local project administrators and the faculty study supervisor served without compensation. Qualified nonrelief research assistants were appointed, however, to assist them in some of the institutions where qualified relief clients could not be found.

Twenty-three studies were outlined and coordinated by staff members of the Office of Education. In addition, 10 auxiliary studies and 17 studies proposed by cooperating institutions, were coordinated by Office of Education and project staff members. The institutions completed from 1 to 14 studies each. A total of more than 165 final study reports were made by all institutions. The most important findings from these studies are being assembled and will be made available to educational workers throughout the country.

The several project studies were conducted in from 1 to 31 institutions each. Typically, each institution conducted about three studies. One institution, Ohio State University, conducted nine major coordinated studies, one auxiliary study, and four studies proposed by that institution.

The reliability and acceptable quality of the findings were safe-guarded through several means. In the first place, the universities invited to participate in the project included only accredited institutions with adequate facilities for conducting graduate research work. Many of the best-known universities in the country participated in the project. Studies for the most part were planned in advance, and some had been successfully conducted on a limited scale before the project began. The institutions and their staff members had only two incentives to undertake the considerable amount of work involved in the project. One incentive was the humanitarian desire to provide suitable employment for college-trained workers unable otherwise to find employment during the depression; the other was the desire of staff members to forward needed research in fields in which they were interested professionally. Only valid and worth-while findings were of interest to university staff members and to the Office of Education, and the institutions rarely initiated or continued work unless they were reasonably well satisfied with the research personnel and facilities that were available to them under the conditions of the project. The findings and statistical work of the local project workers were checked not only by local study supervisors but also by Office of Education coordinators.

Certain limitations were made in the types of research undertaken. Few if any studies were initiated that did not hold satisfactory promise of valid and worth-while findings. The majority of the studies were in the general field of professional education, since funds were limited and the Office of Education could be of most assistance in this field. Studies involving the services of highly expert technicians were not undertaken except in large institutions having a satisfactory supply of such workers. On the other hand, it was possible for a

number of universities to launch a Nation-wide concerted attack on several important educational investigations never before attempted in this country on such an extensive scale.

From one to six personal conferences were held by the Washington project staff members, with the local project administrator or institutional study supervisor of 92 percent of the participating institutions. Although these institutions were located from coast to coast in 28 States, but two-tenths of one percent of project funds was spent by the Washington staff for traveling expenses. This unusual record was made possible by careful scheduling of field trips; by the inclusion of participating institutions in the regular field itineraries of Office of Education staff members, and through the contribution by some institutions or institutional staff members of nonproject funds to meet traveling expenses to Washington.

### Popular studies

Some of the more popular project studies undertaken included study no. 7, economic study of college alumni, conducted in 31 institutions. In this study approximately 75,000 college alumni living in all sections of the country co-operated with the universities they had attended by supplying information concerning their occupational and economic status. With the assistance of all such data, colleges and universities may proceed much more intelligently in the formulation of their objectives and program of instruction. Study no. 10, student mortality in institutions of higher education, was conducted in 25 institutions. In this study, approximately 15,000 freshmen who entered the several schools and colleges of higher education institutions of all types were followed through their college years since 1931-32. Analyses were made of the extent to which these students remained in college, their scholastic success, the causes of their withdrawal, and other facts of significance to the institution and to education in general. In study no. 14, relation between certain factors in high-school education and success in college, information was assembled from the records of 17 institutions concerning high-school and college marks and ratings, comparisons were made, and conclusions were drawn of help to high-school and college teachers and staff members. Study no. 5, economic status of rural teachers, was an integrated attack upon teacher personnel problems in that great sector of American education in which improvement is so badly needed. Other

### List of Participants

INSTITUTIONS that conducted studies in the Project in Research in Universities were as follows:

University of Arkansas, Fayetteville.  
Stanford University, Stanford University, California.  
University of Southern California, Los Angeles.  
University of California at Los Angeles.  
University of Colorado, Boulder.  
University of Denver, Colorado.  
Colorado State College of Education, Greeley.  
Connecticut State College, Storrs.  
Howard University, Washington, D. C.  
University of Florida, Gainesville.  
Mercer University, Macon, Ga.  
University of Georgia, Athens.  
University of Hawaii, Honolulu.  
De Paul University, Chicago, Ill.  
Northwestern University, Evanston, Ill.  
University of Chicago, Chicago, Ill.  
University of Illinois, Urbana.  
Iowa State College of A. and M. Arts, Ames.  
University of Louisville, Louisville, Ky.  
Tulane University of Louisiana, New Orleans.  
Boston University, Boston, Mass.  
Massachusetts State College, Amherst.  
University of Detroit, Detroit, Mich.  
Wayne University, Detroit, Mich.  
Mississippi State College, State College.  
University of Mississippi, University.  
Washington University, St. Louis, Mo.  
Montana State College, Bozeman.  
Rutgers University, New Brunswick, N. J.  
New Mexico College of A. and M. Arts, State College.  
Columbia University, New York, N. Y.  
New York University, New York.  
Syracuse University, Syracuse, N. Y.  
Polytechnic Institute of Brooklyn, Brooklyn, N. Y.  
Rensselaer Polytechnic Institute, Troy, N. Y.  
State College of A. and E. of the University of North Carolina, Raleigh.  
University of North Dakota, Grand Forks.  
North Dakota Agricultural College, State College.  
Ohio State University, Columbus.  
University of Toledo, Toledo, Ohio.  
Western Reserve University, Cleveland, Ohio.  
Oklahoma A. and M. College, Stillwater.  
University of Oklahoma, Norman.  
University of Oregon, Eugene.  
Duquesne University, Pittsburgh, Pa.  
Pennsylvania State College, State College.  
University of Pennsylvania, Philadelphia.  
South Dakota State College of A. and M. Arts, Brookings.  
University of Tennessee, Knoxville.  
Vanderbilt University, Nashville, Tenn.  
Fisk University, Nashville, Tenn.  
George Peabody College for Teachers, Nashville, Tenn.  
Texas Christian University, Fort Worth.  
Brigham Young University, Provo, Utah.  
University of Utah, Salt Lake City.  
University of Vermont, Burlington.  
Gonzaga University, Spokane, Wash.  
University of Washington, Seattle.  
Marquette University, Milwaukee, Wis.  
University of Wyoming, Laramie.

representative studies included the apportionment of State school taxes and funds, several aspects of vocational education, unit costs of higher education, and CCC Camp education.

The methods of research employed were varied, according to the nature of the 40 or more studies undertaken and the conditions under which 60 separate projects operated in the coordinated research program as a whole. The field in which most of the studies was conducted was professional education, although data were collected in some studies that applied directly or indirectly to the learned professions, agriculture, home economics, engineering, finance, public administration, hygiene and health, and other fields or subjects. The purpose of the studies was in general of a practical nature; findings were desired that would assist in the betterment of current practices. Field rather than laboratory work was stressed. Data were collected by search of documents and records available locally, and through use of inquiry forms, tests, rating scales, and other devices. Data of an objective rather than a subjective nature were desired.

The amount of funds allotted to the several cooperating institutions varied in accordance with the number of qualified relief clients available, number of institutional staff members available for study supervision, nature and scope of the studies undertaken, and other factors. Amounts ranged from a few hundred dollars to \$37,412, allotted to Teachers College, Columbia University. Transfers of funds upon inter-institutional and inter-State bases were made as needs developed and as funds were released by institutions completing authorized studies. By no means all of the requests for additional funds could be granted, since the project was conducted on a 1-year basis and no additional emergency relief funds were available when the project completed its original program. Several of the institutions, however, are continuing work with their own funds on aspects of former project studies not taken up during the life of the project.

The cooperating institutions donated to the project not only the services of the local faculty administrative and supervisory staffs, but in nearly all cases provided free housing space and met charges for maintenance and upkeep of such quarters. Very little permanent equipment was necessary, and most of this was rented. The administrative expenses of the project were kept to a figure quite comparable to those of work projects in general.

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# Forums and Reading

**W**HAT part does reading play in public forums? What part can it play? The American Library Association, in cooperation with the Office of Education, set out recently to try to get light on these two questions. Observation trips were made to a few forum cities and inquiries sent to over 400 forum administrators and leaders and over 100 libraries. Briefly, it was learned that little reading was being done either as preparation or as a follow-up in connection with most forums, and that many forum administrators and librarians were either not conscious of the desirability of tying reading to forums or, if they were conscious of it, had developed no very effective technique.

In making the survey, we have assumed not only that the union of discussion and reading is highly desirable, but that both discussion without supplementary reading and reading without supplementary discussion are educationally deficient. If these are valid assumptions, then our examination of present-day experience seems to indicate the need of an attack in three directions:

First, there must be a definite program of publicity and education to demonstrate to forum patrons the values of reading in connection with the discussion of public questions.

Second, reading materials must be made more accessible than they now are.

Third, a much more suitable type of reading material must be provided.

Let us examine the findings of the survey under each of these three headings in some detail.

## Educational publicity vital

The group of the nonreading adult public, which makes up a large section of forum audiences, needs to be made aware of the reading opportunity, and to have removed its fear that the libraries and other sources of reading material are too complicated to learn to use.

The forum leader is in a most favorable position to direct attention to reading. Next in importance is the presence at the meeting of an experienced librarian who knows the subject matter and can personally recommend and lend books.

## John Chancellor, Adult Education Specialist of the American Library Association, Analyzes Their Relationship Through Survey Results

Newspaper publicity through articles by forum leaders or librarians, or interviews with them, stressing the reading opportunity, rather than merely listing books, is helpful.

Reading lists distributed at the meetings are useful as auxiliaries to these other methods of personal recommendation but are not by themselves adequate stimulants of interest. Their value is increased if they are annotated from the point of view of the reader; if some indication of the relative difficulty, length, and popularity of each book or pamphlet is given; if they carry a prominent invitation to ask a librarian or a forum leader for personal suggestions; and if they are attractive in format. Reading lists should be prepared cooperatively by leaders and librarians, and should ask for the reader's comment on whether he found satisfaction in any of the readings suggested.

## Accessibility necessary

The educational and professional worlds are slow to recognize a principle that businessmen know—that easy availability is essential in introducing a new product. Experience in distribution of reading material to forum patrons indicates that having books and pamphlets available in the same building in which the forum is held is not enough. It must be in the meeting room or near the exit and available with a minimum of borrowing routine and restrictions. The special display in libraries of books on forum subjects is of some value but its use is mostly by regular library patrons. The reading interest of nonreaders and those who are not regular library patrons is seldom strong enough to carry over until they have the opportunity to visit the library and run down some recommended book.

A supply of duplicate copies of popular books or pamphlets equal to the demand is a vital factor in accessibility. Frequently library budgets are insufficient

to provide the necessary supply of duplicates. Experience indicates that a relatively small auxiliary provision for reading materials in the forum budget materially helps this situation and enables a much wider circulation of books and pamphlets.

Pamphlets seem, in many respects, more popular and more suited to use by public affairs forums than books. Their relative cheapness makes it possible to provide them in greater quantities than books and also necessitates less precaution against loss. But the available supply of satisfactory pamphlets is seriously limited by inadequate production due in part to the fact that low-priced pamphlets cannot be distributed through the usual book-marketing channels without a subsidy. Distribution on a quantity basis rather than a single copy basis seems essential to solve the problem. Forums and other civic education enterprises seem to have an opportunity here to create a large popular market for pamphlets and perhaps to supply a required link in the chain of distribution, buying in quantity and reselling to their own patrons who presumably are a selected interest group.

## Readability the prime requisite

The provision of an adequate supply of "readable" material is obviously the most important of the three major problems. There is little use to promote interest in reading at forums or to make reading matter more easily available if our books and pamphlets are not inherently interesting and understandable to the people who are to use them. In fact, some harm may be done by such promotion.

The need for readable material in the social sciences is especially marked. The researches of William S. Gray and others at the University of Chicago indicate that most social science material—pamphlets, and magazine and newspaper articles, as

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# SCHOOL LIFE

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JUNE 1937

## MIND AND BODY

**A** SOUND mind in a sound body is a thing to be prayed for." So wrote Juvenal in one of his satires somewhere about eighteen hundred years ago and his words have echoed through the centuries to this moment. But Juvenal was not the first to formulate such a petition. Horace, a hundred years earlier cried, "Grant it to me Apollo, that I may enjoy what I have in good health. Let me be sound in body and mind." Poets only express in fitting language what their fellows also feel and this same petition, whether uttered or unexpressed, antedates history.

Different meanings are easily read into the same words and Juvenal's lines have been taken as indicating that a sound body is essential to the possession of a sound mind. Possibly in that realm where mind and body merge—the emotional life—there is much truth to this but it is not so with intellectual accomplishment. John Locke, after repeating Juvenal's petition, complained that one cannot go far with a crazy physique, but Locke himself went a long way, mind-wise, despite his asthma and other

ailments. His "Conduct of the Human Understanding" is said to have passed through more printings than any similar work of modern times. Locke was possessed of a very sound mind in a very unsound body, and some of the greatest products of the spirit have emanated from mortals whose livers or lights were in the last stages of decay.

Bernard Shaw, reacting violently against the interpretation we have mentioned, exclaims, "Mens sana in corpore sano" is a foolish saying. The sound body is a product of the sound mind." But Shaw is only exaggerating Plato's remark, "My belief is, not that a good body will by its excellence make the soul good, but, on the contrary, that a good soul will by its excellence render the body as perfect as it can be." In other words only a person with ambitions to be someone and do something will fully appreciate the value of bodily health and will care most to maintain it.

In the past half century some 200 attempts have been made to find out by actual measurement the relationship of mind, as it reacts to educational tests and in school progress, to body, as measured by tape and scales and medical examinations. Save for conditions affecting the brain directly and where serious defects, such as deafness, shut out impressions readily acquired by others and thus influence our conventional measures of mentality, the correlation is but slight. The small or defective pupil often excels in his school work his larger and more perfect fellow. The relationship for the average scholar which does appear, hints at an underlying, causal condition producing both the inferior or the superior physique and mentality. Despite this slight relationship we should not overlook the fact that mind does its work more easily and more persistently in proportion as it is well-housed. Locke could not do all that he wished and in declining an appointment as ambassador to Germany, he said, "Supposing industry and good-will would, in time, work a man into some degree of capacity and fitness, what will they be able to do with a body that hath not health and strength enough to comply with them."

Seneca, whose days were lived between those of Horace and Juvenal, said, "First of all we must have a sound mind and one that is in constant possession of that sanity", but "be careful, without anxiety, of the body and all that concerns it."

As Karl Pearson puts it "Nature selects for physique and she selects for mentality." She shakes her genetic kaleidoscope without caring how the pieces pair. Happy they to whose lot falls both a fine mind and a superior body, but where this

does not happen we can make the most of the combination with which we are endowed.—JAMES F. ROGERS, Senior Specialist in Health Education, Office of Education.

## THE QUEST FOR HAPPINESS

**I**T IS the function of the schools to give to every person, as far as it is practicable to do so, the key to unlock and claim the riches that are the commonest possession of all who are willing to pay the price. Unlike some other inheritances, this one can be claimed only by those who will prepare themselves to be worthy of it. Merely dotting our land with buildings that point their spires heavenward, or hanging the masterpieces of art on our walls, or making countless books available through a thousand libraries, or bringing the drama of the ages into every city, village, and hamlet, or making the great music available to even the humblest man, does not mean that all will be able to claim the messages that these and a myriad other sources of happiness have for them. Only those who have acquired the techniques of interpreting, who have learned the meanings of the various languages through which the messages are spoken, who have attuned their thoughts and their emotions to catch the messages that are all about us like the unsensed and uncaught radio waves which in the dead of night flood the world, only those can expect to succeed in this age-old quest for happiness.—A. J. STODDARD, Superintendent of Schools, Providence, R. I., in *Secondary Education*.

## LABORATORY FOR LEADERSHIP

**W**E HAVE the best form of government on earth. Its strength lies in the intelligent support of the people and in wise administration through informed and sympathetic leaders. Let us stop to realize that the United States is one of the few countries in which the ideals of democracy have been made to work in the interest of the freedom and happiness of the people. Defects common to all earthly organizations are thus traceable to human weaknesses. These affect the administrative policies and procedures, but not the theory and principle of our system of government. Therein lies an opportunity for informed youth of character and patriotism to observe the operations of our system and to safeguard against faults in the administration of affairs under that system. \* \* \*

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William D. Boutwell (left) and Shannon Allen.

UNCLE SAM has delivered nearly half a million letters from radio "fans" to the Office of Education since the establishment of its Educational Radio Project about a year and a half ago, under the direction of William Dow Boutwell.

"Such a response to programs is most gratifying," says Director Boutwell, "particularly in view of the fact that educational programs on the air have been generally considered poor risks by broadcasting companies." Mr. Boutwell cites the constant problem of trying to meet two demands at the same time, viz, the audience's demand for entertainment and the educators' conviction that such programs should offer educational material of thought-provoking values.

The Radio Project has sought to meet these demands through the cooperation of experienced persons in each field. The broadcasting companies and the educational profession have shown a fine spirit of cooperation in the development of these "airways to learning." The general policy committee of the Office of Education for the Radio Project is composed of Commissioner J. W. Studebaker, Administrative Assistant C. F. Klinefelter, and Director Boutwell.

### Building the program

Like any commercial program, each of the educational series is built upon a basic idea. For instance, "Let Freedom Ring", the Monday night series, is an attempt to present dramatically the development of our civil liberties. The "Have You Heard" series seeks to make vivid the fascination of science and its accessibility to the average man. Such ideas meet a need for information that will be useful and entertaining to a wide public, and at the same time will stimulate interest.

Any proposed idea for a new series is immediately put to the test. The author is asked to prepare a statement of his

proposal which would answer such questions as: Is there a public need for such a series? Will the series be of interest to a wide group of listeners? What services in addition to the broadcast can accompany the series? How can the listener be stimulated to acquaint himself further with the subject?

With such a prospectus in hand, the Commissioner of Education calls a joint conference of specialists in radio and in education. Unless the prospectus proves to the "jury" that the proposed program will be a public service and that the method of presentation suggested is practical it is rejected. During the last year 65 prospectuses have been considered. All but seven were rejected as lacking in educational or entertainment value.

### Script writers at work

If the prospectus is tentatively approved, the burden is shifted to the script writer, who prepares the first four or five scripts of the proposed series. His work is charted by certain *guideposts*, prepared by Director Boutwell, as follows:

1. The program must have unity. That is, the parts must contribute to a central idea, which in turn is a logical part of a program series.
2. The subject matter selected must be educationally important. A good test of importance is whether the fact or anecdotes would be included in the curriculum of a progressive school system.
3. The program must effectively induce a considerable proportion of listeners to explore the subject more completely by reading, by discussion, or by some other self-educative activity.
4. A summary must be included at the close of the program to fix in the listener's mind the major points brought out by the script.
5. The selection and presentation of the material must be such that the voluntary interest of "students" (listeners) will be aroused.

### A prime requisite

Good scholarship should be the first requisite of every educational program. The script-writer is usually assisted by a research worker. They gather, analyze, and summarize the facts upon which the program is built.

Perhaps the writer needs to know how Lincoln's voice sounded. How was a

spelling bee conducted in 1840? Or how did the war drums of some ancient tribe beat? Trips to the Library of Congress, to the National Archives, and to many other places may throw light on the answers.

### Data checked

In this way the many facts necessary to a good script are gathered together. In preparing his manuscript, the writer indicates the source of each quotation or fact. The original form of a paraphrase is carefully noted. A list of sources is attached to the script. These data are verified by specialists in the field.

Finally a committee of experts passes on the whole script. If it is stimulating and accurate in point of fact—in general, a good educational presentation—the script is approved for production.

### Studio production

When the script is approved, it is sent to the New York unit of the project for production. There both the National Broadcasting Co. and the Columbia Broadcasting System provide the project with studios, sound equipment, and other elements of the highly complex business of putting a program on the air. Their greatest contribution, of course, is the time which they donate every week for the broadcasts sponsored by the project.

One of the interesting and important elements of any program is the incidental music. Usually it is drawn from the great storehouse of the world's musicians, but now and then it must be composed especially for the occasion. Rudolph Schramm, musical director of the project, frequently writes original scores for both orchestra and voices.

### Listener participation

One of the criteria of a good educational program is: Does it offer the listener an opportunity to participate?







A radio committee at work.

This opportunity is provided in two ways by the radio project's series. "Visual aids" may be used by the listener while the broadcast is going on. For "The World is Yours", the program sponsored jointly with the Smithsonian Institution, a periodical of the same name giving a prospectus of the programs for the month, with pictures and charts, is mailed out in advance. Over 150,000 were requested by listeners in April alone. "Let Freedom Ring" had thousands of requests for copies of the Constitution which it offered on one of its programs.

### Development of new methods

Such a response from the public indicates that the difficult problem of developing radio programs both interesting and educational, is making progress. It also points out a great field for education, still largely unexplored—education by radio. With this progress of exploration, education is being brought to the people through "airways to learning."

### ★ Interesting Exhibits

DID you ever see show windows in a library? You may at the Enoch Pratt Free Library in Baltimore, Md., and those who pass the library on their several errands walking or riding at various paces invariably glance in or pause for a better view.

Without losing the beauty of the traditional library building, show windows similar to those in the better department stores have been introduced on the street level of one façade. Through the use of these 12 windows to exhibit books for children and books and objects of current interest, the Pratt Library has an added opportunity to expand its influence to those who otherwise may rarely visit a library.

Inside the Pratt Library another ex-

hibit attracted considerable interest recently, although it was unannounced on the bulletin board or at the entrance of the library. The magazine room of this public library on the second floor—a room about 30 by 125 feet—had been cleared of magazines, and this space was devoted to an unusual private school exhibit.

The main portion of this exhibit was a visual follow-up study of 40 of the 300 former students and graduates of the Park School of Baltimore over the past quarter century. All exhibits were the actual work of students and former students.

Compared with the out-of-school vocational and avocational work of the alumni are specimens of their in-school activity to show the carry-over of school interest and activity. Work shown included research in natural and social sciences, fine and commercial art, literary and scholarly writing, engineering, various phases of play production, music, dancing, advertising, photography, and hobbies. The exhibit did not represent the entire alumni, as only that work which could be displayed visually was presented. It is the first attempt coming to our attention to visualize a long-time follow-up study.

ANDREW H. GIBBS

### Editorials

[Concluded from page 298]

"We need in all the affairs of life, to study and appreciate the written and the unwritten code of ethics that should be observed by all tourists on the highway of life. Yes, we need to create an attitude that is willing to share the road with fellow-travelers and thus mutually help others in their pursuit of the goal of life.

"In Washington, the 'road maps' are made at the direction of the Congress. This great law-making body is chosen to represent the American people. Ordinarily, it is thus a mirror of the country's thinking. Under our democratic system, all power is vested in the people. It is their right and privilege to prompt the action of Congress. Therefore, unless their ideals are reflected by the Congress, the people themselves, through the ballot box will, when informed with regard to the conditions and needs of their country, make speedy changes in their chosen representatives. The Congress is the greatest map-making, that is, law-making, body in the entire world. But its actions are not always final. For example,

local courts interpret and through the procedure of appeal, Acts of the Congress may finally be interpreted by another great body which we call the Supreme Court of the United States.

"Then, the execution or enlargement of these 'road rules' is directed in Washington through the Executive Departments, under the personal responsibility of the President. \* \* \*

"In the intellectual quality of our leadership, we are probably not superior to the great figures which stand out in the history of older nations. The difference is that our country offers a wider distribution of educational opportunities. The result of this is more widespread knowledge and ability to think. This educational equipment is far more universal in the United States than ever before in the history of any nation. Not only is it the essence, but the bulwark of democracy."

*Excerpts from a recent radio address of Hon. DANIEL C. ROPER, Secretary of Commerce, to the Boy Scouts of America.*

### BENEFITS RECEIVED

"THE most important thing among many benefits I have received from my enrollment in the CCC is the development of physical fitness, mental alertness, social responsibility, moral discipline, and the growth of standards of conduct that are indispensable. What have I got out of the CCC? A more abundant life; a severe grounding in the fundamental principles that govern the conventions of life; a more liberal, widened attitude of many aspects of the world; a realization of any capabilities that I may own and a freer expression of my talents; perhaps, most of all, a more solid, appreciative understanding of the rules that control the game of life and the application of the oldest and most divine philosophy one can inculcate: 'Do unto others as you would have them do to you.'"

Thus wrote a CCC enrollee, Phil O'Donnell, who last month won first prize in a national CCC essay contest. Recently the Nation celebrated the fourth anniversary of the Civilian Conservation Corps. For more than 3 years the educational work of enrollees in all camps has been directed by the Office of Education.

SCHOOL LIFE, official organ of the Office of Education, comes to you 10 months of the year for \$1. With a subscription you also receive MARCH OF EDUCATION, the Commissioner's news letter.

# Salary Trends in Rural Schools

**T**HE RECENT CRISIS in education is now approaching that stage in its development when educators both individually and by group action are attempting to make a dispassionate appraisal of just what did happen in our schools during the recent depression. Especially are they interested in determining what, if any, structural weaknesses have been laid bare in the educational system, in the hope that they might know where and how to make adjustments or to build along sounder lines.

In keeping with this general tendency to re-examine our school system in the light of weaknesses thus revealed, it is my purpose to discuss here some of the aspects of the present salary situation in our schools. Since so large a portion of the annual school budget is devoted to instruction, it is clear that the salary situation has many implications for the whole system of public-school finance; and since salary problems are particularly critical in the schools located in rural and sparsely settled communities, chief emphasis will be given in this article to the rural aspects of the problem.

The first point to which attention of the reader is directed is the widely observed practice, both before and since the depression, of basing salaries upon the size of the school served and upon the type of the community. *In common practice, the smaller the school and the more sparsely settled the community, the less is the pay received by the teachers.* To be sure, the disparities between the salaries paid in one-room schools and those paid in larger schools are less marked in States in which larger portions of the financial support for schools come from State or county, rather than from local sources; but even in these, almost without exception, the smaller the school the less the salary paid.

## Statistics illustrate

A few statistics will suffice to illustrate this situation. For the Nation as a whole, data reported to the Office of Education for 1930 showed that the median salary for teachers employed in one-room schools was \$788; for two-room schools it was \$829; for those located in

## Walter H. Gaumnitz, Senior Specialist in Rural Education Problems, Discusses the Salary Situation with Chief Emphasis Upon Rural Aspects of the Problem

the open country employing three or more teachers, it was \$1,017; for schools of the same size located in villages and towns, it was \$1,157; and for cities of more than 2,500 population, it was \$1,771. Note in passing that salaries in the city schools were nearly two and one-half times as great as in one-room schools.

Data from three States will serve to show substantially the same situation in individual States. For one, let us take California. The schools of this State, long known for the excellent salaries paid to teachers, showed the following salary medians, in the order indicated, by size of schools: \$1,360; \$1,482; \$1,557; \$1,559; and \$2,249.<sup>1</sup> Now let us look at data for Arkansas, which State has consistently ranged low in salaries. For 1930 this State reported the following salaries, respectively, by size of schools: \$477; \$537; \$674; \$796; and \$967.<sup>1</sup> New York, which is well known for its carefully organized program for equalizing school support, and in which one would expect to find comparatively small disparities, shows nevertheless the same general tendency to pay lower salaries as schools become smaller. This may be seen from the following figures: \$992; \$1,166; \$1,421; \$1,459; and \$2,652.<sup>1</sup>

## Greatest cuts

Similar data gathered in recent years support the generalization stated above and have revealed also that *when reductions must be made in school budgets, the greatest cuts are made in the salaries of teachers who are already receiving the lowest pay.* Retrenchments in school expenditures appear to follow an ancient truth: "From him that hath not shall be taken away even that which he hath." For the Nation as a whole, the last 5 years have seen a reduction of 34.4 percent from the extremely low median salary shown above as paid in one-room schools in 1930; for two-room schools the reduction was 25.2

percent; for schools of three or more teachers located in the open country it was 20.5 percent; for village or town schools of the same size it was 17 percent; and for the city schools it was 10.1 percent.

With few exceptions, the tendency among States is to make the largest reductions in salaries of the lowest paid teachers who are employed in the smallest schools. Again, by way of illustration, comparison of salary medians for California, Arkansas, and New York for 1930 and 1935<sup>2</sup> reveal that, except for minor irregularities, the generalization holds. For California the following salary cuts were reported in percents for the respective sizes of schools listed above: 11.2, 9.5, 12.1, 4.1, and 14.7; for Arkansas they were 46.8, 40.0, 34.6, 39.9, and 30.4; and for New York they were 10.3, 13.0, +1.2<sup>3</sup>, 2.1, and +1.9.

Another aspect of this situation may be shown by ranking the States first in descending order according to median salaries in one- and two-teacher schools and second in ascending order according to salary reductions. Such a comparison of rankings indicates that States which pay the highest salaries show also the smallest percentage of salary reductions. It appears on further investigation that, in States in which support comes from local sources, salary-cuts are more drastic than in those which draw on State and county funds.

Recent data, though incomplete, indicate that salaries have increased both in urban and in rural communities. Generally speaking, however, it appears that school authorities in charge of the larger schools have responded more quickly to improved economic conditions than those of rural communities. It therefore seems probable that salaries of rural teachers are now improving somewhat. Compared to their urban colleagues, however, these

<sup>2</sup> Data for city schools are based upon figures from 1934.

<sup>3</sup> + indicates increase in salaries during the period in question.

<sup>1</sup> Average; median not available for city schools.

teachers are probably in a less favorable salary position at present than they were in 1935.

### Disparities need correction

The facts in the case are unequivocal. In prosperous times the prevailing policies of education work out in such a manner that the public invests on an average  $2\frac{1}{2}$  times as much to procure a desirable teacher for the larger urban schools as it does to procure one for the smaller rural schools. In times when retrenchments have to be made, the conditions responsible for this outcome tend further to widen this disparity. At the present time the average city teacher receives more than  $3\frac{1}{4}$  times as much as the average teacher now employed in the 138,542 one-room schools scattered over the country. Granting that the cost of living and related factors justify paying somewhat lower salaries to rural teachers, the disparities revealed are unjustifiably disproportionate.

It is clear that a democratic system of education cannot become a reality when in normal times the teachers of some of our schools must maintain themselves at so great a disadvantage as these figures indicate. That, in times of economic strain, these same poorly paid teachers should also be called upon to bear the greatest burden necessitated by retrenchments, is almost unbelievable. Professionally trained teachers cannot be expected to be attracted to nor remain long in the smaller rural schools unless ways and means are found to place them in a more equitable position as concerns salaries.

### Forums and Reading

[Concluded from page 297]

well as books—rate either “difficult” or “very difficult” in phraseology, vocabulary, etc., and probably also in concepts.

Fortunately, some first attacks on the problem are being made. There have been some fairly successful attempts to produce readable material in the social sciences in the pamphlet field and to a lesser extent in the periodical field. A “readability laboratory” to analyze, rewrite, and produce understandable manuscripts in serious subjects on an experimental basis has been created in a large university, and promising cooperative relationships with interested publishing houses have been established.

### Library and forum

There are examples from many parts of the country and many different sized com-

munities of the advantages accruing from a joining of the resources of these two informal adult education agencies—forums and libraries. Libraries of varying kinds and sizes have been hosts to varying kinds and sizes of forums and discussion groups. The meeting rooms of some libraries have accommodated the small, follow-up discussion groups connected with large forums. The adult education departments of some city libraries have acted as recruiting agencies in the formation of such discussion groups. Other libraries have established information bureaus to help independent groups to secure local leaders, lecturers, and library representatives at meetings. Many libraries have sponsored “reading groups”, either in connection with forums or independently, which meet in small informal gatherings to read and discuss books or current topics as treated in specific books.

The use of branch library buildings in large cities or community libraries in small towns and villages is especially noteworthy. There is an increasingly evident trend for such library units to become centers of a variety of informal education and cultural interests in outlying city neighborhoods and in small communities. The simpler routine, the lack of crowds and hurrying, the informal and friendly atmosphere of such library units, make them more and more favored as locations for forums, study clubs, musicales, lectures, exhibits, etc. In the small town and village their opportunity to act as cultural outposts in fostering such opportunities is increasingly important.

Unfortunately, library resources and reading material distribution in rural areas to supplement the recent developments of discussion groups on economic problems among farmers, are relatively weak in many areas. However, the United States Department of Agriculture and the State agricultural extension departments promoting these rural discussion groups have been unusually prompt in developing their bulletin and pamphlet service to meet the special needs of their discussion groups. Cooperative action between the agricultural extension agencies and library agencies in the areas concerned has begun also.

In the next few years it seems probable that a greater consciousness of the value of reading as an important supplementary aid to discussion will spread rapidly, and that forums may give a strong impetus to the movement to provide social-science reading materials which will be both understandable and interesting to a large section of the population who now read little or nothing in such fields.

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# College Entrance Requirements

**F**IFTY years ago, when the universities and colleges set their own examinations for admission, there was no set of standard examinations that all students might take. Each college determined the fitness of applicants by testing students in certain tool subjects which were believed to be necessary for pursuance of college work. Because no two of these institutions maintained the same requirements, preparatory schools were hard pressed to prepare individual students or groups of students for different colleges and at the same time maintain satisfactory work for those who did not intend to go to college.

## "Committee of Ten"

As early as 1871 the University of Michigan began to inspect and accredit high schools with a view to accepting graduates of approved schools without examination. The famous "Committee of Ten", the forerunner of the college entrance examination board, began a system of cooperation between colleges and secondary schools in 1892. In 1900 a group of eastern college representatives met and agreed to accept board examinations as full substitutes for their own, and in 1901, the first entrance board examinations were held at 67 points in the United States and two in Europe. Nearly a thousand candidates presented themselves, and as a whole the results of the first examinations were satisfactory.

From that time on more and more colleges accepted these examinations in lieu of other requirements. Until 1916 the participating colleges required every applicant to take a separate examination in each subject required for admission; this system is now known as plan A. Beginning in 1916, comprehensive examinations were devised and each applicant was encouraged to take four comprehensive examinations at the end of the high-school course; this system is known as plan B. At that time Harvard, Princeton, and Yale gave up their own examinations and turned all candidates for admission over to the board. In 1919 Vassar, Smith, Mount Holyoke, and Wellesley gave up the certificate method of admission and sent their candidates to the board.

## Walter J. Greenleaf, Specialist in Higher Education, Office of Education, Describes Development of Various College Entrance Requirements and Present Status

### Aptitude test

The scholastic aptitude test, a kind of psychological test, was established in 1926 when the board endeavored to improve the character of its examinations as measuring instruments. In general, high scores on this test indicate that a student has ability to do scholastic work of high order. On the basis of this test alone, some institutions admit students without any other examination.

Last year (June 13-20, 1936) college board examinations were held at 339 centers and administered to 14,449 candidates who came from 1,896 secondary schools. The section of the country from which these students came is of interest: New England and Atlantic States, 10,971; Southern Division, 1,797; North Central Division, 1,797; Western Division, 450; Territorial Dependencies, 41; foreign countries, 150; and unknown, 4.

One reason for the prominence of this standard in the East is that many colleges in that section limit the number of students admitted on a basis of capacity of institution, which takes into consideration, plant, budget, staff, dormitory space, and other factors. In general this means limiting the size of the freshman class, as for instance in Harvard where freshman classes are limited to 1,000 students; Yale, 850; Dartmouth, 600; Bowdoin, 160; and others that restrict the size of student bodies to the number which they are equipped to handle efficiently. From a large group of applicants such institutions choose only the better qualified students.

Next June (1937) board examinations will be held in many towns and cities throughout the United States. Applicants for admission to college must generally file applications with the director of admissions at the chosen college by April of the year in which they intend to enter. Further details concerning the June examinations may be obtained from the college entrance examination board, 431

West One Hundred and Seventeenth Street, New York City.

### Units required

These examinations cover the subject requirements of the 15 units generally demanded for college entrance. A "unit" is interpreted as a year's study in any subject in a secondary school, constituting approximately a quarter of a full year's work. A 4-year secondary school curriculum represents not more than 16 units of work. The average college requirements for entrance, as determined by one study, include: English, 3 units; mathematics,  $\frac{3}{4}$  unit; social studies,  $\frac{1}{2}$  unit; natural science, 1 unit; foreign language,  $\frac{3}{4}$  unit; and electives to make up 15 units.

The manifest advantages of the board examinations as stated in their thirty-sixth annual report for 1936, are that—

They are uniform in subject matter.

They are uniformly administered.

They are held at many points to meet the convenience of students at one and the same time.

They represent the cooperative effort on the part of a group of colleges, no one of which thereby surrenders its individuality.

They represent the cooperation of colleges and secondary schools in respect to a matter of vital importance to both.

By reason of their uniformity, they aid greatly the work of the secondary schools.

They tend to effect a marked saving of time, money, and effort in administering college-admission requirements.

### Admission-without-examination

Examinations are not the only means of entering college however. For a long time other methods have been in use. The National Survey of Secondary Education found that 23 percent of 517 colleges and universities accept students on a basis of the high-school diploma as a single criterion, most frequently in the

[Concluded on page 316]



## Office of Education

At the left is the Commissioner of Education, the third floor of the new Interior Department building, the right is the Assistant Commissioner of Education, the Assistant Commissioner for Vocational Education, the left, and the picture immediately below his is the Klinefelter. The chief of the Department's library.

Other pictures show the entrance to the auditorium, the cataloging room, and the reference alcove.

The Office of Education occupies parts of the third floor of the building, which is located within a block of the intersection of Eighteenth and Nineteenth Streets NW. It is a modern structure in Washington, authorized, designed, and constructed by the Department of the Interior. It houses the Office of the Secretary, the Office of the Solicitor, the Office of Education, the General Land Office, the Bureau of Indian Affairs, Bureau of Reclamation, National Park Service, and Island Possessions, Division of Conservation, Bureau of Mines, Petroleum Conservation, and the Commission on the National Park and Planning Commission, and the Commission on the National Park and Planning Commission.

This beautiful building is simple and modern in design, with elevators and escalators throughout. It has elevators and escalators throughout. It has elevators and escalators throughout.

An outstandingly beautiful part of the building is the library, which houses more than 250,000 books and a great number of periodicals.

[Concluded on page 10]



## tion's New Home

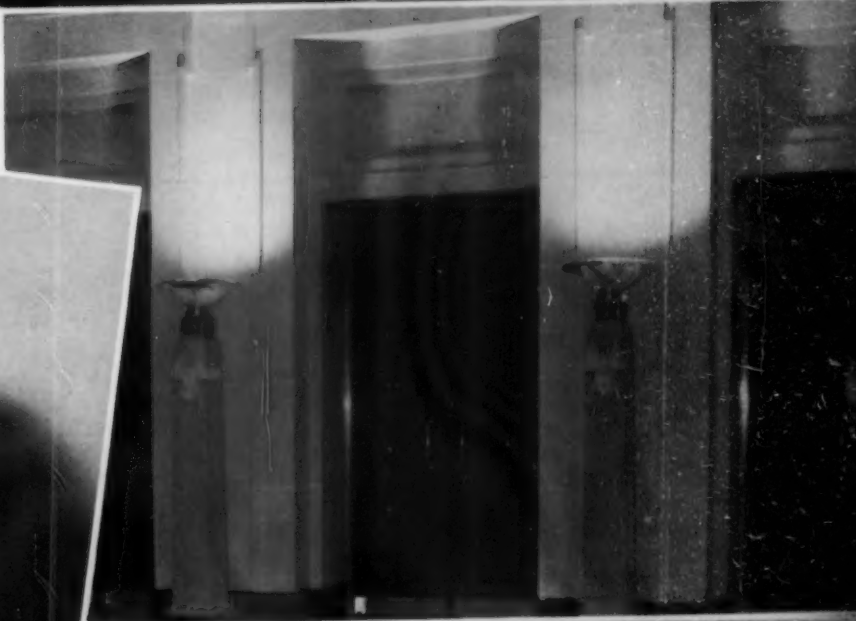
Education, J. W. Studebaker, in his office on  
or Department Building, Washington. At  
er of Education, Bess Goodykoontz. The  
al Education, J. C. Wright, is next on the  
low his is Administrative Assistant C. F.  
ment's library is Sabra W. Vought (below).  
to the auditorium, the reading room, the  
rove.

arts of the first, second, and third floors of  
block of the old Interior Building between  
W. It is the first major Federal Govern-  
rized, designed, and built by the present  
of the Secretary of the Interior, the Office of  
n, the General Land Office, the Office of  
n, National Park Service, Division of Terri-  
sion of Grazing, Division of Geographic  
a Conservation Division, National Capital  
the Commission of Fine Arts.

nd modern in design. It is air-conditioned  
escalators. A large cafeteria serves both

the building is the library, which already  
a great number of periodicals on the shelves

ed on page 307]





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## New Government Aids for Teachers

★ Order free publications and other free aids listed from agencies issuing them.  
Request only cost publications from the Superintendent of Documents, Washington,  
D. C., enclosing remittance (check or money order) at time of ordering.

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**W**ILLIAM H. BRISTOW and KATHERINE M. COOK are coauthors of *Conservation in the Education Program*, Office of Education Bulletin 1937, No. 4, now off the press. The purposes of this bulletin are, first, to provide school officials and others interested with information concerning progress so far made in introducing conservation into the school program; and, second, to stimulate further progress through a description of instruction practices which have been successfully followed in a number of school systems. For your copy send 10 cents to the Superintendent of Documents.

Thirteen recipes for serving rice alone or in combination with meats, fish, milk, cheese, eggs, vegetables, and fruits are given in *Cooking American Varieties of Rice*, Department of Agriculture Leaflet No. 112, priced at 5 cents.

Cultivation, packing, and shipping bulbs, breeding, etc., of the tulip, which is today the most popular and most extensively used, in the United States at least, of any of the spring-flowering plants, is described in *Tulips*, Department of Agriculture Circular No. 372 (10 cents).

Directions for the construction of sundials, tables for the equations of time, and mottoes are given in *Sundials*, a Bureau of Standards publication selling for 5 cents.

*Washington: City and Capital*, second of the larger volumes of the American Guide Series being prepared by the Federal Writers' Project of the Works Progress Administration is now available from the Superintendent of Documents at \$3 a copy.

Containing more than 400,000 words and 1,100 pages, it reviews the capital's historic background, presents a critical interpretation of its cultural and social



# CONSERVATION IN THE EDUCATION PROGRAM

UNITED STATES DEPARTMENT OF THE INTERIOR  
OFFICE OF EDUCATION  BULLETIN 1937, No. 4

aspects, and outlines various tours which may be taken in and near the city.

A separate section of the book lists all of the Government departments, agencies, and bureaus and discusses their various functions. More than 100 photographs, detailed floor plans of important buildings, and numerous maps are included in the volume. Three large color maps of the city are to be found in a pocket attached to the back cover.

Printed on good-quality paper, the edition is attractively bound in cloth. Although planned primarily for visitors, this book should become a popular source-book for students of government and the history of the Capital.

This is only one of the volumes of the American Guide Series now being compiled by the Federal Writers' Project. Functioning on a Nation-wide scale the project is preparing guidebooks for each of the States and many localities, the sum total of which will constitute a "portrait of America", according to Henry G. Alsberg, national director.

Attention of SCHOOL LIFE readers is again called to the *Daily Revised Manual of Emergency Recovery Agencies and Facilities Provided by the United States Government* issued by the National Recovery Council. This simplified textbook of Federal activities, which enables one to use directly the emergency services which the Government has established, sells for \$1.50.

### Films and Maps

The Department of Commerce has a new series of maps designed for high-speed flying. These millionth-scale maps are drawn to a scale of about 16 miles to the inch. Seventeen of them will cover the entire country.

Each map will show six times as much territory as the present sectional maps, which are drawn to a scale of 8 miles to the inch. The present maps cover a territory about 325 miles east and west and 150 miles north and south. Only 25 of the contemplated 87 sections have been completed.

The flyer will see the location of cities and towns, highways, railroads, power transmission lines, rivers and lakes, landing fields, airway lights, radiobeacons, lighthouses, elevation of the terrain, and dangerous obstructions.

The Pittsburgh Experiment Station of the Bureau of Mines has available in both 16- and 35-millimeter sizes a two-reel, silent film entitled *Making of V-type*

*Automobile Engines*. The story opens with the arrival and unloading of an ore boat and the storage of the iron ore. These scenes are followed by others showing the charging and tapping of the blast furnaces, the handling of molten iron, charging electric furnaces, adding alloys, building molds, casting molten metal, etc. Finally, the engine is put together on the assembly lines, tested, and placed in the chassis of an automobile.

Schools, churches, clubs, civic and business organizations, and others may borrow the film by applying to the Pittsburgh (Pa.) Experiment Station, United States Bureau of Mines. No charge is made for the use of the film, but the exhibitor is asked to pay transportation costs.

MARGARET F. RYAN

### New Home

[Concluded from page 305]

and in the stacks. The reading room is paneled in dark walnut. There are six levels of stacks. These stacks and shelves have an estimated capacity of 400,000 volumes. The general public is invited to use the library's facilities and books may be taken out by qualified students, teachers, and research workers.

The chiefs of the various divisions and services of the Office of Education have large, comfortably furnished offices and their respective staff members are located nearby. Near the Commissioner's office on the third floor are the Assistant Commissioner's offices, and the administrative offices.

The Office of Education together with other bureaus of the Department shares in a museum in the new building which when completed, will show something of the work of the entire Department. The Office also shares in an art gallery on the seventh floor which will exhibit some of the best work of art students throughout the country.

As a matter of historical interest, the Department of Education, which was established by act of Congress in 1867, was changed in name to that of Office of Education and made a part of the United States Department of the Interior in 1868. Some years later its name was again changed, this time to that of the Bureau of Education, which it remained until recent years when the title of 1868—*Office of Education*—was restored.

For the past 4 years the Office of Education has been located in rented quarters. In its seventieth year of service it happily falls heir to its share of the new Department of the Interior building.

### A Program of Cooperative Research

[Continued from page 296]

The project operated under an Executive order requiring that at least 90 percent of all persons employed on a work project be taken from the public relief rolls. Although some institutions were unable to initiate projects because of this regulation, the project as a whole was able, except for very brief periods when local projects were being organized or closed, to maintain the required ratio throughout the life of the project. During some months the ratio was exceeded materially. In the case of no project was a request for exemption to the required 9-to-1 ratio of relief to nonrelief labor necessary.

The number of paid workers on the project varied from month to month. The total number of paid relief and nonrelief workers was 473 on September 17, 1936. The ratio of relief to nonrelief workers on that date was better than 12 to 1. These figures do not include, of course, more than 200 local project administrators, study supervisors, graduate students, and others who served part time without compensation.

Former graduate students, college graduates, and former college students were employed when they were available from the public relief rolls. A few workers with the doctor's degree, somewhat more with the master's, and a considerable number with the bachelor's degree were employed. Most of the employees had attended college for some time. The exceptions were chiefly typists and clerks who had business college training, or experience in business and related vocations. Relief workers were paid security wages ranging from approximately \$50 to approximately \$100 per month, depending upon their occupational classification, the size of the city in which they were employed, and the geographical area in which they were located. They worked a maximum of 40 hours per week. Since they were selected insofar as possible because of their special qualifications for the work, it was no surprise that the local project administrators reported that, with very few exceptions, they could testify to the faithful and conscientious service of these employees. Through the employment of these workers and the consequent redirection of their activities along lines for which they had talent or liking, the project achieved a major objective in capitalizing an otherwise unutilized social resource.

[Concluded on page 315]

# Vocational Summary



## Air Corps offers varied courses

**Y**OUNG men who have an ambition to enter the field of aviation will be interested in the opportunities available for those who qualify for education and training in the United States Air Corps. Five Air Corps schools are in operation. Two of these—Randolph Field for primary pilot training, and Kelly Field for advanced pilot training—are located at San Antonio, Tex. These two fields together constitute the Air Corps Training Center. The other three schools are located as follows: Maxwell Field, for tactical training, at Montgomery, Ala.; Chanute Field, for technical and mechanical training, at Rantoul, Ill.; and Wright Field, for aeronautical engineering, at Dayton, Ohio.

At the Air Corps Training Center the flying cadet receives an intensive 1-year course in pilot training, is required to put in 330 odd-hours of pilot time, and gets a thorough ground training. The student who completes this training may then be assigned to active duty for 3 years with an Air Corps tactical unit, after which he may be promoted to first lieutenant for an additional 2 years. Desirable and profitable employment in some phase of commercial aviation is generally available to the Army-trained pilot upon release from the Air Corps.

Applicants for cadet training should be physically and mentally fit, unmarried, between 20 and 26 years of age, and should have completed at least one-half of a recognized college course; or they may show the required education by passing an examination on specified college subjects.

Enlisted men may pursue one of the following courses at the Air Corps Technical School, at Chanute Field: Airplane and engine mechanics, aircraft armor, machine shop work, aircraft welding, sheet metal work, parachute rigging, photography, radio operation, radio repair, clerical work (supply and technical), and airplane maintenance engineering.

While most men enrolled at the Chanute Field Technical School are selected from those already in the Air Corps, about one-fourth are selected from high-school graduates who apply to the commanding officer for this training.

## Vermont and Kansas accept

The legislatures of Vermont and Kansas have recently passed laws accepting the terms of the Federal rehabilitation act, which provides for Federal grants for the vocational rehabilitation of disabled persons. The Vermont legislation provides for the financial support of the State program of rehabilitation, which will probably be started at the beginning of the next State fiscal year. The Kansas legislation accepts the terms of the Federal rehabilitation act but appropriation of adequate funds will probably not be considered until the next biennial session of the legislature. Legislation has been under consideration in Delaware, but no information has been received as yet as to the final action on this matter. With the acceptance by Kansas and Vermont, 47 States, the District of Columbia, the Territory of Hawaii, and the Island of Puerto Rico are now cooperating in this Federal-State program.

## A \$4,100,000 pay roll

A weekly pay roll of approximately \$82,600 and a yearly pay roll of more than \$4,100,000 is represented in the wages of 6,113 graduates of part-time and all-day vocational trade and industrial schools in 13 North Atlantic States, a study made by a special regional committee shows.

Two thousand and sixty-three graduates of part-time courses in 47 different trades and 9,259 graduates of all-day courses in 43 different trades were covered in the study made during the fiscal year 1935-6 and presented at the annual conference of supervisors and teacher trainers at Asbury Park, N. J., last month. Trades for which these graduates were trained range from auto mechanics to millwork, commercial art, ceramics, nursing, watchmaking, silver-smithing, cosmetology, and template making.

Seventy percent of those trained in part-time schools and 59 percent of those trained in all-day schools were placed in the occupations for which they were trained. The average weekly wage for part-time graduates is \$13.64 and of full-time graduates \$13.45. Attention is called to the fact that the maximum

wage for the part-time graduates as revealed by the study is \$39.29 and of full-time school graduates \$25.00. The higher range of pay for part-time school graduates is accounted for, of course, by the fact that they are drawn from those who have been employed for varying periods and have acquired experience and skill in their work.

Graduates of part-time courses in trade and industry increased 24 percent since 1930 and the number of those placed was approximately the same. The rate of placement dropped 17 percent; and wages for these graduates declined 34 percent. Graduates of full-time courses increased 82 percent; the number placed 58 percent; the rate of placement dropped 4 percent; and wages for those graduates declined 21 percent.

The study of "what becomes of the trade school graduate," from which these data have been developed, is a continuing one which was started in 1929. The committee in charge is composed of Walter B. Jones, supervisor of trade and industrial education, Pennsylvania, chairman; A. B. Anderson, supervisor for trade and industrial education, Delaware; Daniel H. Shay, supervisor for trade and industrial education, Massachusetts; and J. G. Spofford, teacher trainer for trade and industrial education, New Jersey. G. A. McGarvey, agent for trade and industrial education, Office of Education, cooperated in the committee's study.

## Conducts community sale

Annual profits of more than \$4,000 on supervised farm practice programs, and sales of approximately \$15,000 worth of livestock and farm machinery are reported by a part-time vocational agriculture group in Hinton, Okla. This group—15 in all—most of whom are former students of the Hinton vocational agriculture department and members of the Future Farmers of America, is composed of young men who have finished full-time school and are located on farms in the community. It meets twice a month under the leadership of the local vocational agriculture teacher to discuss problems presented by group members.

The principal project of this group is the biweekly community sale which it conducts at the Hinton Fair Grounds.



These sales were started 2 years ago. The group members do all the work in connection with sales, even acting as auctioneers. Sales are conducted on a commission basis.

These young men are learning a lot of things. In the beginning they tried to handle clerical work in connection with the sales and make all settlements. But experience taught them that it was better to employ a representative of the local bank, an experienced sales clerk, to do this work.

Members of the group completed 18-farm-improvement projects last year. Recreational and entertainment programs are a part of their activities. A string band, made up of their own members, furnishes music for their dances and parties.

### Speaking of records

Seventy-eight percent of the 72 graduates of the vocational agriculture department of the Iowa Falls, Iowa, high school are engaged in farming or other agricultural work or attending college. Forty of the seventy-two graduates, a recent survey shows, are now on farms, eight operating their own farms. Twenty-nine are in farming with their fathers. Three are working as farm hands. Eight are employed in agricultural industries other than farming, one is farm-manager for an insurance company, one operates a portable feed mill, one sells farm implements, one works in a hatchery, two work for a packing company, and one is a cow tester. Eight are in college, 10 are employed in nonagricultural occupations, 3 are in CCC camps. The occupation of two graduates is unknown, and one graduate is not living. Here is a record worth studying.

### Just one more thing

Homemaking teachers whose pupils find the home project report irksome and look upon it as "just another thing to do," will be interested in a novel plan followed by Miss Alfreda Skillin, director of home economics in Thornton Academy, Saco, Maine.

"My biggest problem in connection with projects," she states, "is to induce students to make their project reports as interesting as possible. Since the actual project work done by students is usually of a high grade I felt we should do something to encourage the written work. So I enlisted the cooperation of the English teacher, Mrs. Abbott. Homemaking pupils are required to keep the record of their project work in diary form. Eventually these notes are written up as a report and passed in to Mrs. Abbott who



Training Center for United States Air Corps.

grades them on spelling, correlation of ideas, paragraphing, and other factors. Students are given credit on this report for two of the compositions regularly required of English pupils. I correct the reports for originality and expression, and record of results and accomplishments. Incidentally, Mrs. Abbott and I have found that reports formulated with this double objective in mind, give both of us a fairly good picture of the home life and associations of the students. The reports are neat and interesting and the students like this plan of combining instruction in homemaking and English."

### Forehanded

Prospective itinerant teacher trainers in home economics education for Negroes from eight States attended a special intensive training course at Tuskegee Institute, Tuskegee, Ala., from April 5 to June

5. This course, which was arranged through the joint cooperation of the Institute, the Alabama Department of Education, the General Education Board, and the Office of Education, grew out of a need for better qualified itinerant teacher trainers, which it is expected will develop with the allotment of funds authorized under the George-Deen Act, effective July 1. Candidates for this course were chosen on a selective basis by State superintendents of education, supervisors of home economics, and directors of education for Negroes. The expenses for the course were covered by scholarships provided by the General Education Board.

Classwork, observation activities, participation in teacher-training work in selected schools, and a study of actual problems facing teacher-trainers, were combined in the Tuskegee course.

CHARLES M. ARTHUR

# CCC Contributes to Human Conservation



**I**N A recent statement before a congressional committee, Robert Fechner, Director of Emergency Conservation Work, stated: "With no disparagement to the huge work accomplishments of the CCC nor

to its collateral economic and relief aspects, I feel that the creation and preservation of human values has been and continues to be the signal service of the CCC to the Nation."

The truth of the director's statement is certainly borne out by the accomplishments of the Corps. Almost 2 million young men have been members of the CCC since its inception over 4 years ago. They came from all walks of life—farms, small towns, and cities. Many came from families that had never known anything but poverty, from homes where living conditions were unwholesome and insanitary. Others were from families once moderately prosperous but now victims of the depression.

Many had had few, if any, educational opportunities. A number had become disheartened over what the school had to offer them and had dropped out. Most of the men were undernourished. Months or years of idleness had stifled their ambitions, sapped their energies, and left them indifferent or hostile to every wholesome influence. Crime among young people was definitely on the increase. These hundreds of thousands of young men were a potential menace to the future of the country.

Soon after its inception, the CCC began to show results as a builder of men, and it has continued to add to this record of achievement. The camps supplied a new and wholesome environment for thousands of undeveloped youth. The hard work in the open air, the rugged life close to nature, the abundance of good, plain food, the association with enrollees, officers, and supervisors, the pride in doing an honest day's work, recreational and educational opportunities—all these factors contributed to their physical, mental, and moral change. Not only did most of them pick up from 10 to 15 pounds in

## Howard W. Oxley, Director of CCC Camp Education, Describes Its Services to the Nation's Young Men and to American Education

weight, but their attitude toward life and surrounding conditions became better. A majority of them showed a greater desire to plan intelligently for their future, by choosing a vocation and preparing for it.

### Educational accomplishments

The educational program in the camps has faithfully served to help make the CCC the builder of men that it is. Since 1933 over 50,000 illiterates have been taught to read and write; more than 300,000 enrollees have been better grounded in grade-school subjects; over 200,000 have pursued high-school courses, while 50,000 have taken college courses. Systematic instruction on CCC work projects has developed the vocational skills of over 1,000,000 men and has taught them the value of regular work habits and efficient management.

Upon reviewing the contributions of the CCC educational program, we find that it has focused public attention upon the unpreparedness of modern youth, has demonstrated the educational usefulness of the work project, and has applied on a Nation-wide basis progressive methods and techniques in educating enrollees.

### Unpreparedness of youth

The fact that the CCC has found approximately 2.7 percent of its enrollment illiterate and approximately 38 percent on the elementary school level indicates in graphic fashion the unpreparedness of a sizable cross section of American youth. Add to this statement the fact that over three-fourths of the enrollees never received any systematic vocational training before reaching camp nor had many of them thought seriously of their occupational plans for the future. When we recall that the average age of the enrollee is around 20, we further recognize the extent of youth's retardation and lack of adjustment.

### Use of work project

In demonstrating the educational usefulness of the work project, the camps

have made a contribution not only to the men but also to the field of general education. The camp situation has restored a good deal of what had been lost through the formalization of education. It supplies an opportunity to get back to a natural type of education.

With the rise and formalization of the schools, there occurred a separation between the content of education and the work-a-day world, a separation between learning and doing. The separation of education from work is undesirable, first because education without application becomes academic and formal, and second because work without thought and study becomes drudgery. CCC education, in making use of the camp work project, restores the connection between learning and doing which has been overlooked in so much of our schooling.

To achieve the best possible results for each man, CCC education has made use of progressive methods and techniques. The counseling and guidance of each enrollee forms the foundation of the program. It is a student-centered program with the needs, abilities, and interests of the individual enrollee dictating the nature and content of the curriculum. This approach necessitates a very close relationship between the instructor and the learner. The instructor is constantly watching the progress of his student throughout his camp experiences to determine the type of work for which the youth is best fitted and to help him develop his preparation accordingly.

CCC classes are conducted on a discussion basis, with each participant feeling free to contribute a thought or an idea at any time. Films, slides, radio programs, charts, graphs, and shops are used to enrich and extend class work. Instructional materials, in large part, have been prepared by educational advisers or cooperating colleges and universities so as to meet the problems and interests of the men. Full use is made of all phases of the camp situation to broaden the contacts and experience of the men.

## Planning for the future

Having come through four years of testing, the Civilian Conservation Corps now awaits further development as a



CCC class in bookkeeping.

permanent part of this country's educational and human conservation program. The Corps' future and the possibilities for building youth into manhood through it should be a matter of major concern to everyone. The camps should be more closely integrated with the system of American education. Together, the schools and the camps can do much to supplement each other's activities and offer a wider variety of practical education.

To my mind, one of the greatest services which the camps on a permanent basis can perform is to take a large number of out-of-school and unemployed



CCC workshop.

youth each year and prepare them for employment and good citizenship. *The Herald News* of Fall River, Mass., has well put the case as follows: "Nobody can doubt, however far the revival of industry may go, there will always be a large group of young men who are floundering around in search of employment, without any definite ideas of their own and perhaps without much ambition to get settled at steady work. For such as these the opportunity to enlist in a CCC camp would be a blessing. The regularity of living, the discipline of the organization, the training that would come from the work to which they are put could not fail to give them a new outlook upon life and turn them free, at the end of their enlistment, with a better idea about getting private employment and what is necessary for keeping it."

## Electrifying Education



TWO HUNDRED AND THIRTY PERSONS from all over the country attended the Eighth Annual Institute for Education by Radio held at the Ohio State University, May 3-5, 1937. Among the subjects emphasized were, the educational responsibility of radio, the training of broadcasters and studio techniques. Among interesting statements made at the institute are the following:

"We might treasure a few periods of silence."—GLADSTONE MURRAY, *Director*, Canadian Broadcasting Corporation.

"The more college teachers we can get before the microphone, the better for their teaching, and the better for the service of their institutions."—J. LEWIS MORRILL, *Vice-President*, Ohio State University.

"By its very nature radio (1) must operate on and through the public domain and (2) it must be publicly regulated. For these reasons the public will never relinquish its control of radio, and for the reasons stated above, this control will probably tend to increase rather than to diminish. This policy and trend are expressed in the announced determination of the public through Congress to insist that radio be operated in the people's 'interest, convenience, and necessity.' The severity of governmental controls will be lessened in the degree in which the radio industry makes controls unnecessary."—JOHN W. STUDEBAKER, *United States Commissioner of Education*.

COPIES OF THE PROCEEDINGS of the Institute may be ordered at \$3 each from Dr. Josephine MacLachy, Ohio State University, Columbus, Ohio.

THE CORDON CO., 225 Lafayette Street, New York, recently announced the publication of a new textbook in visual education entitled, *Visualizing the Curriculum*, which has been written by Charles F. Hoban, well known authority in the field of visual education, his son, Charles F. Hoban, Jr., associate in motion picture education of the American Council on Education, and Assistant Professor Samuel B. Zisman of Texas Agricultural and Mechanical College. This column contains 300 pages and 140 illustrations. It may be purchased directly from the publisher for \$3.50 a copy.

THE CALIFORNIA ASSOCIATION for Adult Education, 311 State Building, Los Angeles, Calif., has recently released a 17-page mimeographed report of *A Radio Experiment* in adult education, which makes a genuine contribution to this interesting field.

TEACHERS INTERESTED in summer school courses in visual education should examine the list of summer school courses in visual education in the June 1937, issue of the *Educational Screen*.

THE AMERICAN COUNCIL ON EDUCATION announces that the proceeding of the First National Conference on Educational Broadcasting which was in Washington last December have been published as a 350-page volume entitled *Educational Broadcasting—1936*; and may be purchased from the University of Chicago Press, 5750 Ellis Avenue, Chicago, for \$3 per copy.

A RECENT INQUIRY DISCLOSES that 56 radio programs prepared from scripts furnished by the Office of Education were broadcast by 36 stations in 26 States during a single week. Teachers or radio station managers who are interested in obtaining copies of these free scripts for dramatic productions over the air, should communicate with the Educational Radio Script Exchange, Office of Education, United States Department of the Interior, Washington, D. C.

FOR AN EDUCATIONAL VACATION this summer the national parks cannot be surpassed. Intimate acquaintance with scenic beauty, with forests and with wildlife afford inspiration and an understanding of the meaning of the historical, geologic, and biologic features of these superlative areas which have been reserved as the birthright of every citizen. Guided trips afield, lectures, museums, and natural trails are free to the public and greatly help in making a vacation worthwhile.

INFORMATION, MAPS, AND PUBLICATIONS helpful in planning your trip are available through the National Park Service, United States Department of the Interior, Washington, D. C.

CLINE M. KOON



# Education in Burma

**B**URMA, whose political connection with India was severed on April 1, has been influenced greatly by the educational policies of the Government of India. The famed Macaulay Minute of 1835 committed India to a plan of English education and gave rise to the oriental-occidental controversy which has been waged in Hindustan for more than a century. While today there is a growing tendency to vernacularize education in the Indian Empire, few critics of the existing system deny the desirability of continuing the use of English for higher schools. At the same time, champions of native culture in both India and Burma have protested against the process of Anglicization thus set in motion, and have stood firmly for a system of education conducted in the language of the sons of the soil.

The Burmese are Mongolians akin to the peoples of western China and neighboring Siam rather than to the Aryans of India. One of the most striking features of life in this charming land is the universal prevalence of the Buddhist religion whose benign influence no one in Burma can escape. Buddhism provides Burma with its indigenous school system, the monasteries. Nearly every Burmese son spends some time under the palm trees bathed in the drowsy influence of one of the 20,000 monastic schools found usually near some tinkling pagoda. Some remain in school only a few days, others wear the yellow robe a lifetime. Here a rudimentary knowledge of the Burmese language and literature, gained from a study of the *Thinbongyi* (great basket of learning) and the oral repetition of Burmese letters and Buddhist principles, is given the novice. Added to this is much picturesque misinformation in the fields of geography, mathematics, and elementary science. Those who remain to become monks frequently become learned Pali scholars.

## Imported systems

In addition to the monastic system, Burma has three imported systems of education: First, the secular vernacular system; second, the Anglo-vernacular system; and third, the English schools. It is the only province of Britain's Indian

## John Leroy Christian, Former Principal of the Meiktila Technical School, in Burma, Describes the Current Educational Scene in That Province

Empire which affords education for boys and girls in their own language until they finish high school. But, strange to say, these vernacular schools are the most unpopular in the province. They have been criticized as lifeless, leading nowhere ex-

cept to the vernacular teaching profession. Graduates from vernacular high schools cannot enter the university, where the instruction is conducted in English. The same is more or less true of the Anglo-vernacular high schools. It is possible, however, for graduates from this second system who pass high in the provincial examinations, to be certified for matriculation at Rangoon University. English schools in Burma, provided originally to train subordinates for the public service or children whose mother tongue was English, have lost many of their former distinctions and now accept students from all groups.

## Fees charged

Schools in Burma have one common characteristic—nearly all of them charge fees. Most of them receive a government grant-in-aid. Little free schooling is available and there are no laws to compel anyone to attend school. Despite the lack of these incentives, 721,000 students are registered in public and private schools out of a population of some 12,000,000 in Burma proper. These are in addition to the numbers in the ordinary village monasteries.

All registered schools are subject to control by the Director of Public Instruction through his staff of inspectors. Examinations for the entire province are set in the Rangoon secretariat. The provincial authorities control English and Anglo-vernacular schools; local bodies control vernacular schools; the monastic schools are subject to little control by anyone.

## Survey committee

The Government of Burma in 1934 appointed a group known as the Campbell Committee to survey the educational scene in Burma. Their report, which has appeared recently in the press, proposes a remodeling of the entire educational

## Extending Education

**O**F ALL the Provinces and States in India, Burma and Cochin have the highest percentages of literacy. The former is the largest in area (233,492 square miles) of India's Provinces, has a population of 14,667,000, is separate geographically from India, and differs in races and customs so much from India that it will soon have a separate constitution. Over 17 vernaculars are spoken, but about three-fifths of the people use Burmese, one of the Tibeto-Chinese family of languages. The chief religion is Buddhism; the Hindu, Moslem, and Christian faiths have fair representation.

Cochin is one of five States brought into relation with the Government of India through the Madras States Agency. It is a small area (1,480 square miles), mainly coastal, lying along the southwestern point of the Indian peninsula. It has a population of 1,205,000. The principal languages are Malayalam and Tamil, both of which are Dravidian tongues. About one-fourth of the people are Christians. The other religions are mainly Hindu and Moslem.

These articles come from widely different sources. They are expressive of the strong efforts being made to extend education throughout India.

structure. The scheme, which will probably be adopted in its entirety, would have all schools in the province following the same course of study from standards one to nine (when the average student will reach the age of 15). At this point a division is proposed between those who wish to enter handicraft and vocational schools and those who wish to proceed to the university. Those who elect the university will spend 3 years in pre-university schools with special emphasis on English. All schools will introduce English as a second language from the fourth standard, and all English students will be required, as at present, to have a knowledge of Burmese before entering the university. Radical changes in curricula will be made. Some exceptions in language requirements will doubtless be necessary for the schools established by the various racial and religious communities in Burma.

Education of women has made greater progress in Burma than in any province of India. Burmese social customs approximate those of western nations. Women have long enjoyed the franchise, property rights, and independent careers. Of the 2,000 students in Rangoon University during the present year, one-fourth are women.

### The university

The apex of Burma's educational system is the university incorporated in 1920 with a nucleus of two colleges. Now it has four constituent colleges, three of them grouped on a magnificent university estate of 400 acres on the outskirts of Rangoon. The estate has its own public utilities, beautiful playing fields, and considerable frontage on Kokine lakes for water sports. The cost of the estate and buildings was about \$6,000,000, and construction took almost 6 years. Some 200 degrees are granted annually.

The Medical College, established in 1930 near the center of the city of Rangoon, has a wealth of clinical material in the adjoining general hospital with 540 beds and the maternity hospital with 250 beds. The Training College for teachers has a faculty of 22 members. University College, the largest unit, grants degrees in arts and sciences, including forestry and law. Associated with it is the Burma Oil Co. College of Mining and Engineering, endowed with \$500,000 by that company. The principal of University College is the first Burman to hold the post. The second unit is Judson College, managed by the American Baptist Mission Society.

## Public Education in Cochin

A SYSTEM of State education was first set up in Cochin in 1818 by a proclamation establishing vernacular schools in several of the *proverthies* (territorial units of administration). These were closed in 1833 and reopened as taluq or district schools in 1835. English schools were opened at Trichur in 1837 and at Ernakulam and Trippunithura in 1845. Additional ones were started in 1873 in the other important centers: Irinjalakuda, Chittur, Kunnankulam, and Mattancherry. An education code to place the Department of Education on a sound footing and shape the general policy of the Government in matters of education was enacted in 1911. It was revised by a special committee of leading educationists and public men in 1921 and this revision is now being followed.

The very liberal system of grants-in-aid and other provisions embodied in the code led to the opening of many new schools of different grades in all parts of the State under private management, and there are at present 456 institutions of the kind. The educational institutions, including those under Sirkar (public) management, number 637 in all, of which 3 are first-grade colleges, 1 Sanskrit college, 47 high schools, 58 lower secondary schools, 509 primary schools, including night schools, and 19 special schools, with a total enrollment of 165,972 (97,018 boys and 68,954 girls). The institutions under Sirkar management have 54,810 pupils on their rolls, and those under private management, 111,162.

The expansion of elementary education among the masses has been receiving the special attention of the Government and with gratifying success. An insistent demand for more schools and the sympathetic enforcement of the various provisions of the code have induced private individuals and agencies to open new schools in all parts of the State. Where private enterprise was lacking, the Government stepped in and established new schools. Almost all children of school-going age are under instruction. The 509 primary schools, including night schools and the primary departments of secondary schools, have a total enrollment of 143,735 (82,024 boys and 61,711 girls). Of these, 44,767 are in Sirkar and

98,968 in private schools. To eradicate illiteracy from even the most distant corners of the State, a "compulsory primary education act" is being enacted. The Government, however, is relying more on its efforts to take education to every door than on compulsion, to secure universal primary education.

Secondary education has of late made considerable headway. The 47 schools, 25 of which are Government institutions (18 for boys and 7 for girls), and the remaining 22 under private management (16 for boys and 6 for girls), have a total of 6,488 pupils (4,663 boys and 1,825 girls) attending the high-school classes. Of these, 3,549 are in Government institutions and 2,939 in private schools. All these schools afford instruction in a number of optional subjects useful in a practical way to the candidates after their school career, such as agriculture, needlework, embroidery, dressmaking, housekeeping and nursing, shorthand and typing, etc. The lower secondary classes of all the schools have a total strength of 13,507 (8,639 boys and 4,868 girls). Of these, 6,085 are in Sirkar institutions and 7,422 in schools under private management.

The three first grade colleges, Maharaja's College, Ernakulam; St. Teresa's College, Ernakulam; and St. Thomas' College, Trichur; have a total strength of 1,315 (1,031 boys and 284 girls). Maharaja's College is coeducational and is one of the largest institutions of the kind in South India. St. Teresa's College is exclusively for women, and St. Thomas' College for men. Maharaja's College is a Government institution; the other two are private, but St. Teresa's College receives an annual teaching grant from the Government.

In the matter of education for women, the State has been making rapid progress. About 81 percent of the girls of school-going age are under effective instruction. There are 72 primary schools, 15 lower secondary schools, 13 high schools, and 1 college intended for them exclusively, with over 70,000 girls attending. Girls are still allowed the half-fee concession which has been withdrawn by many of the other Indian States.

[Concluded on page 314]

# Registrations in Science

**S**TUDIES of registrations in secondary school subjects conducted and reported upon by the Office of Education at intervals since 1890 reveal that the percentage of the total enrollment taking science subjects has gradually tended toward lower levels over the last 40 years. At no time has there been any marked or sudden decrease, although the fluctuations in certain subjects have at times been pronounced. During the early period of these studies physics, physical geography, and physiology were the leaders, but their supremacy has been erased as new science subjects have taken over much of their content and many of their registrants. At the present time physics is the only one of these three subjects which has a large number of pupils registered in it.

The leader in the science group over the last 15 years has been general science. In 1934 it was offered in 71 percent of the schools and was taken by 15 percent of the pupils. (See attached table.) Next comes biology with 63 percent of the schools offering it and 12 percent of the total number of pupils registered for it. Physics is third in number of schools offering the subject with chemistry in fourth place, but in registrations chemistry is ahead of physics. These relative positions are the same which these four science subjects occupied in 1928.

Taking all four subjects together, 38.8 percent of the total number of pupils enrolled were taking one or another of them. Within the science registration itself, nearly two-fifths were taking general science, less than one-third was studying biology, one-sixth was pursuing chemistry, and one-eighth was registered in physics.

During the 6-year period under consideration, biology made the greatest relative gains in number of schools offering it, with chemistry second. In registration gains the two subjects were close together. General science was third in percentage increases both in schools offering and in pupils registered. Physics was very definitely in fourth position in both particulars.

Noticeable variations appear among States in the emphasis placed upon the different science subjects. Taking as criterion the proportion of the total num-

**Text by Carl A. Jessen, Senior Specialist in Secondary Education. Table Prepared Under Direction of Lester B. Herlihy, Assistant Statistician**

**T**HE article on Registrations in Science follows similar articles on commercial subjects, mathematics, history, and social studies other than history which have appeared in successive issues of *SCHOOL LIFE* beginning with the February number. The series will be completed in future issues.

While data for 1928 as well as for 1934 are given in the table accompanying the article, the reader who is interested in trends over a longer period of time will want to refer to earlier studies of comparable nature made every five years over a 25-year period, and reported upon in the Annual Reports of the Commissioner of Education from 1890 to 1915. The two latest studies, before the present one, were published in the Biennial Surveys of Education for 1922 and 1928.—EDITOR.

ber of schools which offer each science subject one discovers the following ranges: In general science from 6.5 percent of Indiana schools offering the subject to nearly 90 percent of the schools of Pennsylvania and North Carolina giving courses in it; in biology from about 30 percent in the District of Columbia and Nevada to 85 percent in Minnesota and Wisconsin and to over 90 percent in North Carolina; in chemistry from less than 9 percent in Iowa and Oklahoma to nearly 70 percent in Connecticut and New Jersey; and in physics from 12 and 13 percent in Arkansas and Virginia to between 75 and 80 percent in Iowa and Wisconsin.

In registrations somewhat smaller although significant variations among States may be observed. The greatest range occurs in general science, where the percentage of the total enrollment registered in the subject varies from 2.4 in one

State to more than 23 in another State. In biology the range is from less than 9 percent to more than 20 percent; in chemistry from 2.3 to 7.3; and in physics from less than 2 to more than 11.

Certain States apparently have been more insistent on building up registrations throughout the science departments in high schools within their territory than have others. Moreover, some States have developed high percentages of registration in one or more science subjects while other sciences still are offered in few schools or are taken by few pupils. Arkansas, Indiana, Iowa, Michigan, and Virginia offer interesting contrasts of this kind. (See page 320 for table.)

## Public Education in Cochín

[Concluded from page 313]

Physical culture, games, and sports are receiving special attention, and pupils are encouraged to take part in the annual interschool sports and tournaments. A special staff of medical officers is employed for the medical inspection of school children.

The expenditure on education has rapidly mounted, but the State has never stinted education. The annual amount is over 1,850,000 rupees, which represents about 19 percent of the total revenue of the State. About 7 percent of this is spent on college education, 20 percent on secondary, and the major portion, over 50 percent, on primary education. Even this liberal expenditure is becoming increasingly inadequate to meet the growing needs of a rapidly increasing population. At the same time, to allot more than 20 percent of the national income for education is obviously impossible when there are other public services to finance. And efforts for the future will probably be to secure the most advantageous distribution among the several grades of education of the funds that are available.

—From a voluntary report made by the American Consulate at Madras, India.



# Statistical Thumbtacks

## Age of college freshmen

A RANDOM sampling study of 15,000 freshmen entering college in September 1931 in 25 institutions, now in progress as a university research project, shows half of one percent (0.5) to be 15 years of age or under, 5.5 percent to be 16 years of age, 25.3 percent to be 17 years of age and the remainder, 68.7 percent, to be 18 years of age or over.

## Preparation for teaching in special fields

*Students graduating from curricula preparatory to teaching or other educational work, 1933-34*

Curricula	Number of graduates from—		
	Universities and colleges	Teachers colleges and normal schools	Total
<b>PREPARATION FOR TEACHING</b>			
Agriculture:			
Men.....	717	161	878
Women.....	10	17	27
Home economics:			
Men.....	2	—	2
Women.....	2,314	773	3,087
Commerce and business:			
Men.....	437	239	676
Women.....	788	473	1,261
Industrial arts:			
Men.....	398	643	1,041
Women.....	29	43	72
Physical education:			
Men.....	874	431	1,305
Women.....	938	461	1,399
Public-school art:			
Men.....	82	95	177
Women.....	611	314	925
Public-school music:			
Men.....	333	167	500
Women.....	1,071	427	1,498
<b>OTHER EDUCATIONAL WORK</b>			
School administration:			
Men.....	528	173	701
Women.....	144	71	215
School supervision:			
Men.....	53	31	84
Women.....	110	28	138
Educational research:			
Men.....	104	2	106
Women.....	155	1	156

## Emery M. Foster, Chief of the Statistical Division, Office of Education, Brings Another Installment of Important Figures

The Office of Education requests higher education institutions to report biennially the number of persons graduated during the year who have prepared to teach in certain special fields. The tabulation of these data shows whether the preparation was done in a department or school of a university, college, or junior college, or in a teachers college or normal school whose chief business is training teachers. The accompanying table shows 12,848 persons who graduated in 1933-34 had specialized to teach in one of the six fields of agriculture, home economics, commerce and business, physical education, public-school music, and public-school art.

In addition 1,400 persons who graduated in 1933-34 had specialized in either school administration, school supervision, or educational research.

These data are taken from chapter IV, Statistics of Higher Education, 1933-34 and show that, except for industrial arts, a larger proportion of teachers for these special fields were prepared in schools and departments of universities and colleges than in teacher colleges and normal schools.

## Graduates in education

Of the 74,612 degrees granted in 1933-34 by schools of arts and sciences, 3,817 were for specialization in education or teaching. Of the 82,207 degrees granted by professional schools of all types, 32,227 were for specialization in education or teaching. Of this total, 156,819, the number for specialization in education or teaching was 36,044. This does not include 18,749 persons finishing non-degree teacher-training courses in junior colleges and normal schools.

These data indicate something of the extent to which the training of teachers is conducted in professional schools existing for that purpose.

*Degrees with specialization in education or teaching 1933-34*

School	Degrees		
	First	Masters	Doctors
Arts and sciences:			
Total degrees.....	64,149	8,506	1,957
Education.....	3,098	610	109
Professional:			
Total degrees.....	71,612	9,760	835
Education.....	26,690	5,370	167
All schools:			
Total degrees.....	135,761	18,266	2,792
Education.....	29,788	5,980	276

## A Program of Cooperative Research

*[Concluded from page 307]*

Plans for publishing project findings call for the printing of many of the major study reports in a series of Office of Education publications. Most of the printed reports are expected to be available for distribution within the next few months. In the case of many studies of special local interest, publication on nonproject funds has been undertaken by the institutions. Numerous articles utilizing local project findings will appear from time to time in periodicals with National, State or local circulation, thus making such findings more widely available. Some of the data collected will be combined with materials collected independently of the project by the universities or by the Office of Education, and will be used in the regular publications of these agencies. Since a major purpose of the project was to secure and make available materials that would assist in advancing educational practices in the participating institutions, as well as in the country as a whole, the institutions are using the data in State school improvement campaigns, provision of instructional materials, determination of institutional policies, and in related ways.

## College Entrance Requirements

[Concluded from page 303]

southern region among the teachers colleges and normal schools; and 63 percent accept students on the basis of the presentation of a high-school transcript, most frequently in the Middle West and West regions.

With different standards of entrance in different sections of the country, there is a tendency for students of a certain section to remain in that section by choosing a local college. Outstanding universities and colleges, in an effort to build up cosmopolitan institutions, desire national representation in their student bodies.

### At Harvard

In order to attract men from the more remote sections of the country, Harvard has admitted *without examination* since 1922, men who stood in the highest seventh of their secondary school classes. The catalog states: "Ordinarily, a candidate for admission demonstrates his fitness to do college work by his record in the examinations conducted by the college entrance examination board, but students from rural schools in the smaller centers of population and from larger schools in the West and South who have done their school work exceptionally well may be admitted without examination under the highest seventh plan." Experience has also shown that the majority of these candidates apply for scholarships and other financial aid.

### At Yale

At Yale all examinations for admission are administered by the college entrance examination board. "Only when a candidate of superior ability presents an unusually fine school record, or under certain extenuating circumstances, will the board require fewer than four entrance examinations."

### At Princeton

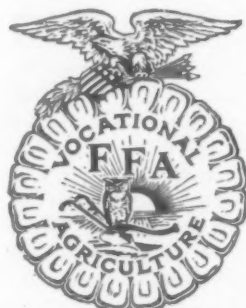
Princeton has found that in the matter of geographical distribution, "It is true that our undergraduate body today includes residents of 46 States, Hawaii, Puerto Rico, and several foreign countries, but it is equally true that more than 60 percent of the present undergraduates live within 125 miles of Princeton. The fact that few other universities can claim better distribution is no ground for complacent acceptance of this situation, for in past years we could lay juster claim to the title of a national university."

This year, for the first time, Princeton has adopted rules to provide for the student who has not prepared for college board examinations. A candidate may qualify for admission without examination if he has satisfactorily completed a course of study in a school which does not prepare for examinations as offered by the college entrance board. However, he must (1) have been in that school for at least 2 years, (2) show a record of exceptional achievement and promise, (3) have the unqualified endorsement of his principal or head master, and (4) have taken such basic subjects as will permit him in due course to meet the requirements for a Princeton degree.

According to the Princeton Alumni Weekly, December 4, 1936, "In the last 6 years the emphasis in deciding college admission has definitely changed from a study of marks in college board examinations to a critical analysis of school

achievement. College board results are useful in checking against school records, but Princeton is almost alone among the men's colleges in requiring college board examinations of all candidates. From the time that Princeton adopted the college board examinations, our scholastic standards rose, but at the expense of national distribution. Colleges in the South and West have never required the board examinations, and naturally the schools in these regions have not made their curricula conform to requirements in which but a small percentage of their students are interested."

While the new "Admission-without-examination" plan in Princeton applies only to students whose records are superior, the university expects to gain a wider field of choice of freshman, a higher scholastic level, a better geographical distribution, and a fairer claim to national representation.



## F. F. A. News Bulletin

The National Board of Trustees of the F. F. A. met in Washington, D. C., April 30 to May 5, inclusive. Revision of the constitution of the organization and making plans for the tenth convention celebration were the chief items under consideration. Visits to many points of interest in and around the Nation's capital were made. Those attending were Joe Black, Wyoming; Phelon Malouf, Utah; Julian Pierce, Kentucky; Roy Martin, Texas; Clark Nicholson, Maryland; Elmo Johnson, Tennessee; Henry C. Groseclose, Virginia; J. A. Linke and W. A. Ross of Washington, D. C.

### WEST VIRGINIA

Robert Brown of Kingwood chapter is the editor of the West Virginia F. F. A. News. He has served 2 years as chapter reporter, and one as chapter president. Robert also holds the degree of State Farmer and served as a delegate to the Ninth National Convention.

### IOWA

The Iowa Association now includes 92 chapters and over 2,500 members which is a 29 percent increase over last year.

The State band composed of 100 pieces from 40 chapters appeared at the State convention held at Ames, May 13-14.

### TENNESSEE

Orders for 11,000 locust trees were obtained from farmers by the Ripley chapter and three shipments of fruit trees for home orchards were distributed at cost to citizens of the locality, by the members.

### OREGON

In a recent attractive illustrated publication entitled "Vocational Education in Oregon" four full pages appeared which included 21 pictures of vocational agriculture and F. F. A. activities.

### INDIANA

Six F. F. A. chapters in Morgan County have combined their efforts on a county-wide basis. They meet regularly and have formulated a definite program of work to be carried out on a cooperative basis.

### MISSOURI

The Drumm Institute chapter located at Independence recently sponsored a field day for 11 neighboring chapters. The principal events included competition in dairy and livestock judging.

### NEW MEXICO

Governor Clyde Tingley was awarded the degree of Honorary State Farmer at the State convention held April 10-12 at Las Cruces. The Governor, who was the banquet speaker, addressed the 300 members assembled from all parts of the State. J. Phelon Malouf of Utah, national vice president of the F. F. A. from the western region, also participated in the convention activities.

W. A. Ross.

# Educational News



## In Public Schools

### Junior Academies of Science

Junior Academies of Science have developed steadily during the past 10 years and are now reported in the following 10 States: Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Pennsylvania, Texas, and West Virginia. There are undoubtedly other States that have such organizations. The science clubs which had previously existed in many high schools were brought together by the State academies as junior academies of science. The meetings of the junior academies, held in connection with those of the adult groups, are managed almost entirely by high-school students, although the sponsors, usually high-school science teachers, sometimes present parts of the program.

Through the State academies, the junior academies of science have been assisted regularly by the American Association for the Advancement of Science. The general secretary of this organization, Dr. Otis W. Caldwell, reports: "There are now thousands of high-school students who are members of their local science clubs and who, through the affiliation with the Junior Academy, gain benefits from the meetings of the adult scientists. Also, the adult scientists in my opinion gain very great benefits through their association with the younger people. It is astonishing to see the quality and seriousness of some of the work done by the younger scientists. It is my opinion that adults have greatly underestimated the capacity and interest in scientific matters on the part of these younger people."

### Safety Manual Issued

Highway Safety, a Manual for Secondary Schools, is a recent publication of the Ohio State Department of Education. In a letter to the department, the Governor of Ohio says: "Ohio is entering upon the most extensive program ever undertaken by the State in a campaign of safety on streets and highways. It is highly important that the youth of our State be taught the proper use of motor

vehicles, for the conditions we desire for tomorrow must first be taught in our schools. I wish to commend the Department of Education for its farsightedness and its progressive attitude in instituting this course of instruction in our secondary schools."

### Safety Training Camp

The Public School News, Indianapolis, Ind., reports: "The first Schoolboy Traffic Officers' Training Camp will be held at the Boy Scout Reservation, northeast of the city, just prior to the opening of school this fall, under the auspices of the Indianapolis Safety Education Council and the Indianapolis Council of Parents and Teachers. The dates have been tentatively set as August 30-September 3. A 4-day period of training in safety practices, life saving, first aid, and supervised recreation designed to prepare the traffic officers for leadership in the schoolboy safety patrol squads next year is being planned by committees under the direction of William A. Evans, chairman of the Safety Education Council. A staff of physical education teachers and other teachers experienced in camping and in boys' work will be selected to have charge of the camp. The Indianapolis Police Department, the Indianapolis News, and other organizations affiliated with the Safety Education Council will cooperate in the camp project. Each school affiliated with the Safety Education Council has been urged to send to the camp the two boys who will serve as the captain and lieutenant of next year's traffic squad. Expenses of the camp are to be met by local parent-teacher associations or other interested school agencies and will be \$5 per boy."

### Studies British Finance

Fletcher Harper Swift, professor of education in the University of California, will leave for England on July 1 under a grant from the Carnegie Foundation, to survey the financing of English and Welsh public educational institutions. Upon the completion of this study, he will visit other European countries for the purpose of acquainting himself with recent developments in education.

### Challenging New Report

"A Survey of School Buildings, Grounds, and Equipment in South Carolina" is the

title of survey report recently issued by the State Superintendent of Education of South Carolina. The report was compiled by the Division of School House Planning with the help and cooperation of the State planning staff. State Superintendent James H. Hope says: "This report contains the most complete data ever assembled on school buildings in the State. By virtue of this fact we are in better position now than ever before to remedy unsatisfactory conditions. This task presents a real challenge to the people of the State in general and to the members of the general assembly in particular. The report has served to bring forcefully to our attention the urgent need of a State equalizing fund for constructing and equipping school buildings in the weak school districts throughout the State."

### Louisiana Looks at Her High Schools

The Louisiana State Department of Education has recently issued a bulletin entitled "Louisiana High-School Standards, Organization, and Administration." This publication covers all the recent modifications affecting the objectives of secondary education, the State accreditation of high-schools, the State program of studies, the suggested curricula, the requirements for graduation, the standards for school plants and equipment, and certain general regulations governing the approved high-schools of the State.

### Arkansas Retirement Law

As a result of legislation recently enacted, Arkansas joins the ranks of States having a retirement law for teachers. Present teachers are given a year in which to decide whether they wish to join. Membership is automatic for new teachers. The teachers' contribution of 4 percent of their salaries is to be matched by the State and retirement is permissible at sixty.

### Washington School Support

Public school support in the State of Washington is now shared by three taxing units: (1) the State, contributing 25 cents a day per pupil, now constituting about 60 percent of total current support; (2) the county, contributing 5 cents a day, now approximately 10 percent of the total;



and (3) the school district, contributing whatever amount the school board may determine up to 10 mills (or more by vote of the people), a share which averages about 15 cents a day, or the remaining 30 percent of the total. These figures are from the *Washington Education Journal* for January 1937.

W. S. DEFFENBAUGH



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WALTER J. GREENLEAF



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Number of schools offering and pupils registered in

Total number of schools reporting and their total enrollments										General science						Biology						Chemistry						Physics					
State or outlying part										1928			1934			1928			1934			1928			1934			1928			1934		
Schools		Enrollments		Schools		Enrollments		Schools offering		Pupils registered		Schools offering		Pupils registered		Schools offering		Pupils registered		Schools offering		Pupils registered		Schools offering		Pupils registered		Schools offering		Pupils registered			
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31				
Continental United States.....																																	
Alabama.....	189	31,205	274	66,317	98	6,283	37	6,441	113	4,598	198	8,905	130	3,547	107	5,462	102	2,426	131	3,751													
Alaska.....	46	11,277	55	15,601	29	1,406	31	1,371	30	1,514	36	2,312	34	990	40	1,386	28	499	28	696													
Arizona.....	235	24,360	285	47,969	165	5,216	213	8,010	100	3,512	196	6,008	40	1,171	43	1,386	49	495	33	838													
Arkansas.....	385	189,748	465	346,552	294	24,445	301	27,786	252	19,649	308	33,755	269	17,688	288	23,314	230	7,261	260	11,472													
California.....	169	32,948	217	58,870	113	4,316	150	6,677	87	3,769	113	6,452	94	3,487	67	5,635	52	2,047	63	4,436													
Colorado.....	89	35,664	98	77,296	78	7,168	86	12,580	60	5,050	71	11,430	54	2,597	67	5,635	52	2,047	63	4,436													
Connecticut.....	20	4,990	26	11,283	19	1,556	10	1,357	20	1,010	21	1,758	13	280	5	638	5	276	9	585													
Delaware.....	16	13,836	24	30,673	10	2,228	10	1,883	6	1,432	7	2,604	6	1,256	7	1,813	6	752	7	749													
District of Columbia.....	153	30,216	176	56,446	125	6,119	141	9,242	84	3,153	113	7,062	50	1,258	75	2,866	59	964	64	1,816													
Florida.....	226	30,536	283	46,187	179	6,633	226	9,426	138	5,770	214	7,663	78	2,607	84	3,232	102	2,315	83	1,717													
Georgia.....	140	18,872	138	27,578	113	3,737	96	4,288	80	2,701	92	4,681	66	1,811	81	2,522	75	1,682	69	1,806													
Idaho.....	801	194,347	892	359,691	566	42,354	601	65,254	313	10,394	505	23,851	228	11,763	261	21,383	524	14,963	571	25,112													
Illinois.....	617	101,522	649	173,438	415	4,459	42	4,188	384	13,783	481	28,221	85	4,263	136	7,057	372	7,276	384	9,701													
Indiana.....	701	81,888	961	146,757	562	15,903	788	25,823	299	7,940	475	20,021	54	2,104	70	3,400	586	11,315	733	16,927													
Iowa.....	574	70,789	565	105,804	407	10,384	413	13,051	220	7,517	278	11,088	65	2,760	71	3,845	381	6,188	323	6,166													
Kansas.....	401	34,214	480	68,925	221	7,196	329	13,680	182	3,917	291	8,665	48	1,819	54	2,690	128	2,571	109	3,056													
Kentucky.....	209	29,057	237	46,505	179	7,712	200	11,341	151	5,274	189	3,312	148	3,711	162	4,661	49	1,394	33	927													
Louisiana.....	168	19,694	124	3,326	118	4,800	89	3,312	62	1,390	59	3,312	92	2,072	89	3,294	78	1,333	88	2,207													
Maine.....	138	27,882	199	70,818	112	6,034	165	13,182	88	5,153	142	10,918	58	2,716	107	6,043	54	2,761	82	5,500													
Maryland.....	283	118,662	458	246,046	225	20,876	290	34,967	136	9,554	183	21,521	156	8,383	199	19,179	156	9,526	180	14,250													
Massachusetts.....	556	123,259	606	254,227	359	12,335	483	22,900	278	13,676	412	31,617	267	12,883	322	21,376	268	7,962	322	11,459													
Michigan.....	473	78,339	545	147,314	359	18,862	483	23,969	260	13,813	447	22,489	240	6,181	341	12,133	253	5,576	219	9,226													
Minnesota.....	260	117,735	285	301,693	172	4,144	208	13,193	159	2,238	222	5,358	53	1,741	90	3,826	53	826	57	613													
Mississippi.....	615	82,069	562	111,774	441	13,383	459	18,755	101	4,063	231	1,298	48	3,184	70	4,358	190	4,061	163	4,659													
Missouri.....	138	17,843	117	26,773	117	5,196	113	4,640	64	2,112	85	3,654	45	1,072	64	1,986	82	1,425	90	1,813													
Montana.....	429	47,652	504	98,909	277	7,925	365	11,726	145	3,569	254	7,669	65	1,556	86	2,514	262	4,486	266	5,185													
Nebraska.....	22	1,914	26	2,722	15	364	19	598	7	106	8	166	9	140	13	164	13	164	9	137													
Nevada.....	112	13,368	104	24,538	36	2,859	15	1,052	28	792	39	1,757	42	1,154	50	1,835	48	1,371	54	1,583													
New Hampshire.....	172	91,362	212	203,086	135	18,203	183	38,574	127	11,347	159	25,722	118	6,672	147	12,209	118	6,847	145	11,701													
New Jersey.....	78	7,613	105	14,028	59	1,378	81	2,246	19	566	19	1,780	21	553	36	1,131	29	401	34	868													
New Mexico.....	712	363,470	784	531,134	124	23,204	525	47,833	614	98,012	356	30,914	303	26,925	461	19,335	493	21,907	480	16,894													
New York.....	471	15,784	451	33,734	379	14,983	405	20,816	379	11,916	412	18,280	88	2,116	104	4,130	171	2,924	258	5,048													
North Carolina.....	324	17,048	487	33,734	132	2,807	272	7,221	65	1,738	210	6,529	51	1,018	89	2,490	44	745	66	1,272													
North Dakota.....	824	176,720	1,235	412,074	635	41,346	978	68,964	535	25,118	859	53,646	294	10,907	555	28,540	467	12,399	705	22,084													
Ohio.....	417	48,545	615	105,643	289	8,422	477	18,370	95	3,491	415	14,044	29	1,517	53	3,482	83	2,063	118	2,927													
Oklahoma.....	196	33,503	225	50,635	155	6,977	183	9,427	99	4,601	141	8,165	39	2,042	52	2,816	68	1,835	68	2,080													
Oregon.....	804	214,308	998	494,715	763	61,319	896	99,445	672	30,240	794	68,965	456	19,197	622	38,089	512	17,638	614	27,311													
Pennsylvania.....	18	12,769	37	36,424	10	3,815	30	4,068	7	553	12	2,481	14	1,135	18	2,267	10	1,055	15	1,472													
Rhode Island.....	121	14,377	185	31,742	90	3,071	155	7,522	67	2,012	142	5,478	35	1,098	55	1,844	38	1,634	54	1,379													
South Carolina.....	252	21,399	258	42,447	193	4,662	206	6,577	87	2,259	122	3,853	53	1,331	56	1,613	127	1,920	96	1,710													
South Dakota.....	288	30,609	366	62,090	154	5,468	264	9,975	141	4,516	195	6,993	98	2,585	98	4,993	69	1,812	87	2,064													
Tennessee.....	463	88,820	798	193,716	291	10,552	689	27,741	182	6,972	451	17,099	134	5,172	250	10,939	215	4,933	306	8,611													
Texas.....	53	15,266																															

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[ BULLETIN, 1937, No. 4 ]

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